

E.N.I.G.M.A.

EUROPEAN NUMBERS INFORMATION GATHERING &
MONITORING ASSOCIATION

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WORLD EXCLUSIVE BUZZER SENDS A MESSAGE!

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C L A S S I F I E D

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VOICE STATION NEWS

All times in ENIGMA are UTC(GMT). All details/IDs have been reported since previous issue. All frequencies are in kHz. Welcome to issue 14.

ENGLISH LANGUAGE (Other active stations: // direct equivalent
/ family member)

E1) READY READY-Mode AM //M17 - See also M17

A major change to voice activity has taken place since July 1997. M17 transmissions (in MCW) are still very active. After several years of stability in voice transmissions the whole schedule seems to have changed and at present we are finding very few. It is possible that they may have moved to more 'obscure' times. At present the only reports we have are:

MON (17.11) 21.50 4460 ID 32 MON (20.10) 07.40 6675 ID 03
WED (09.07) 22.40 5695 ID 13

All transmissions are sent at either h+00 h+20 & h+40 or h+30 h+50 & h+70 minutes past each hour on a different frequency.) Frequencies are: 3410 3910 4270 4460 4740* 5235* 5695 5865 6290 6675 6930* 7425 7790 8070 8140 9050 10470. (*have been known to vary by up to +/- 20kHz)

E3) LINCOLNSHIRE POACHER-Mode USB //E4

We had a good response to part one of our feature and part two can be found in this issue. No major changes to the schedule published in issue 13 other than the use of new frequency's 10225 & 16314. 16314 was noted in use on MON & TUE at 14.00 but is not always used. 10225 was noted in use on WED at 13.00. 4825 approximately was noted in use in Zimbabwe on FRI at 22.00 with a fair signal. It is possible that these and other frequencies may be used in addition to those already scheduled.

We can, however, confirm that jamming takes place from Iran. Recent technical changes to the style of jamming used against LP are now also deployed against the anti-Government clandestine Democratic Voice of Iran. This station can be heard at 18.30 to 19.00 on 5835 & 6210. New style Iranian jammers are deployed against this station which has a British mailing address of BCM Box 5842 London WC1N 3XX. Curiously, (or perhaps not so curiously!) the station signs on with chimes not unlike those of LP. A mixing error on 5835 kHz at 19.00 confirmed that this particular transmitter is in fact used by Voice of Russia world service. Many clandestine organisations are sheltered in the UK including those working against the Governments of Iran, Egypt, Saudi Arabia and Nigeria, to name just a few. This dubious position is encouraged in order to glean intelligence by surveillance & monitoring of these organisations. Black propaganda is alive and well and living in London!

E4) CHERRY RIPE-Mode USB //E3

This station is now more active and with the help of monitors in Australia Japan, New Zealand and the USA we have detected further schedules. Several readers

have noted breaks in the transmissions of both E3 & E4 and ask if they may be from the same transmitter sites? It would seem unlikely, however, breaks may occur due to problems with the satellite feeds from Britain to the respective sites.

At present transmissions are MON to FRI only at the following times. All operate on three frequencies, however, some are still missing in our schedules.

<u>00.00</u>	<u>01.00</u>	<u>10.00</u>	<u>11.00</u>	<u>12.00</u>	<u>13.00</u>	<u>21.00</u>	<u>22.00</u>	<u>23.00</u>
22108	?	17499	14469	13866	13866	5325*	15616	20474
19884	19884	15616	13866	12056	11570		9263	17499
15616	15616	10452	9263	8320	7484		5325*	?

*The 5325 frequency is reported to be testing only. I have also been asked for a list of all known frequencies. These are: 23411 22108 20474 19884 18684 17499 16104 15616 14469 13866 13440 12056 11570 10452 9263 8320 7484 5325 4768.

E5) COUNTING STATION - Mode AM/USB //V5

This station is very active at present and seems to have reached almost fever pitch since SEPT when up to 50 transmissions per week were noted with traffic varying from an all-time low of 41 groups up to 215. Due to the 'shifting sands' of the schedule it has not been possible to reproduce all the logs, many of which would be out-dated before publication; however, a number of notable events have occurred. First a look at the overall picture. Reports indicate a major uplift in activity with the following transmissions noted in use during the last few months.

Total transmissions noted in 24 hour period by day:

MON	TUE	WED	THU	FRI	SAT	SUN	Average per day
10	23	18	19	20	20	22	19

Some odd incidents have included an unusual transmission for '123' on 21.8 at 17.00. The call was noted on 8125 & 9219, but listening on two separate receivers it became apparent that these were not in parallel and when the "count" was reached one was 190, the other 141. We have never heard of this before, but other transmissions should now be checked. The digital data transmissions are also becoming more widespread not only starting on the hour but also at 20 and 40 minutes past the hour.

At present signals from Cynthia are poor in Western Europe but traffic levels still remain high. More info in part two of our feature in this issue.

E6 & E7) ENGLISH MEN '00000' & '000 000', Mode AM //S6 & S7 Families
See S6 for further details.

E6) IDs: 105 145 175 192 194 204 208 237 247 295 312 319 391 394 406 463 523
604 608 609 613 702 709 715 725 731 820 837 841 874 903 906 934 964

We also have a report from Japan of a daily transmission noted at 09.00 on 20970
ID: 837

E7) IDs: 144 167 561 730 845 886 897 See S7 for further details.

E9) MAGNETIC FIELDS Mode AM //V8

The transmissions which were first noted in February 1995 have not been heard since July 1997. Please see V8 for further news about this set up. Last noted using 6645 or 11292.

E10) PHONETIC ALPHABET - NATO STYLE Mode AM

This vast network continues to be very busy with both standard messages and its usual collection of bizarre message strings. Reports received from Zimbabwe and Japan indicate transmissions which do not seem to be well received in Europe which are detailed below. All the following frequencies have been reported active since the last issue, but call signs are prone to change.

Frequencies marked with underline are approximate and were made using an analogue receiver in Zimbabwe.

2270 JSR, 2515 MIW, 2626 FTJ, 2743 ULX, 2894 YHF, 2844 YHF, 2953 VLB,
3150 PCD, 3417 ART, 3445 CIO, 3640 SYN, 3840 YHF, 3950 ULX,
4165 CIO, 4270 PCD, 4360 CIO, 4463 FTJ, 4560 YHF, 4665 SYN, 4780 KPA, 4880 ULX,
5091 JSR, 5170 VLB, 5230 MIW, 5437 ART, 5530 CIO, 5630 CIO, 5820 YHF, 5920 EZI, 5928 SYN,
6370 SYN, 6438 ROV, 6500 PCD, 6658 MIW, 6745 SYN, 6840 EZI,
7322 FTJ, 7445 MIW, 7541 JSR, 7605 CIO, 7918 YHF,
8621 YHF, 8641 KPA,
9131 EZI, 9402 YHF,
10065 MIW, 10352 CIO, 10970 MIW, 11565 EZI, 12747 MIW, 12950 CIO, 13533 EZI, 15040
EZI, 15980 EZI, 17410 EZI, 19715 EZI.

Message strings noted include; CIO-4, CIO-Z, CIO-~~ZA~~,
KPA-26L53,
KPA-TM2
ROV-E, ROV-G, ROV-H, ROV-5,
MIW-18D16F44
MIW-56L44T26
MIW-22B16P56

VLB seems to have sent quite a few different strings and some have changed within the hour confirming the 'real time' importance of this information.

On SAT 6 DEC on 4665 VLB sent -	On SUN 7 DEC on 4665 VLB sent -
-17.45 - VLB-N1107 <u>1000</u>	- 19.45 - VLB-O6908 <u>1600</u> -Y5608 <u>1800</u>
-18.00 - VLB-G1107 <u>1500</u>	- 20.00 - VLB-2
-20.45 - VLB -N1107 <u>1000</u>	- 20.15 - VLB-R11080 <u>830</u> D508 <u>1400</u>
Thanks to Simon Mason & Mike in Kent.	- 20.30 - VLB-L1108 <u>1400</u> S308 <u>1700</u> Q1108 <u>1530</u>
	- 20.45 - VLB-O6908 <u>1600</u> Y5608 <u>1800</u>

Underlined figures are clearly time groups-but what do they signify? Reply back time? Message origin time? The previous 3 or 4 figure group is also very interesting in that it is far from random.

E11) "OBLIQUE" Mode AM/SSB //S12//G11//M3/M20

Only one regular transmission noted in recent months;

FRI 20.30 ID 231 uses 3060 4015 4780 or 5050 depending on time of year.

E12) N N N Mode AM /M2 - See also M2

This station and its much larger sister operation, M2, closed suddenly around November 6th (last log). The station which had its origins back in the 1970s or earlier(M2) was the only voice station known to have transmitted in French & Hungarian. During the Cold War it also used German and was in English for the last two years of its life. The voice operation had slowly moved to just 8 transmissions per week in recent years but the M2 network was as busy as ever. The signals were always very strong in the UK. It is not known if N N N will return.

E15) PHONETIC ALPHABET - pre NATO style Mode AM/SSB

Still quite active but a large proportion of nil messages at present. Male voice also seems more common of late. Reception in the UK only poor.

Reports received are as follows:

11.00 BEC or FYP	18000	17.00 FYP	14000	ALL DAILY
12.00 USP	17503	17.30 MSA	5834	
12.30 MSA	11170	18.00 USP	5834	
13.00 BEC	11000	19.00 SAR	4130	
14.00 FYP	14000	20.00 NAS	5530	
16.30 MSA	6716	21.00 MSA	4130 - 6SS	

An inexplicable development has been the changing of "Robert Adam" at end of transmissions to the more conventional "Adam Robert" - but who in their right minds would use Morse procedure signals in voice? Group counts, however, remain reversed e.g. "12"=21 groups.

E16) TWO-LETTER (ENGLISH) Mode SSB //G16

At present more transmissions in English are noted than in German (odd for a station which is in fact German). First, ALPHA-UNIFORM which always uses // frequencies - unique with this set up.

AU was noted on 31.7, 2.9 & 16.9 between 15.00 & 18.00 on regular 4821//4888. ID's noted: 463 691 865 & 959.

Next, BRAVO LIMA. This call was active daily (other than WED) using a frequency of 11108, 11545, 11617, 12210, 12314 or 13413 Headers noted included messages for 129 139 257 297 477 & 864. MIKE DELTA is still around and noted on SUN at 09.00 ID 296 (sorry, no frequency). And finally, three other less common calls are around: ECHO PAPA, ECHO HOTEL and DELTA LIMA. ECHO PAPA was noted on SAT at 16.00 on 19295 with ECHO HOTEL noted on TUE at 17.00 on 20240 WED at 16.00 on 20350 FRI at 16.00 on 20240 and SUN at 15.30 on 19295. DELTA LIMA seems a little more shy and was only noted in July at 07.00 on 12210. Further information can be found in Simon Mason's column.

E17) ENGLISH LADY '00000' ENDING mode AM Probably part of S6 family.

Still heard with a good signal in North America. The transmission times and frequencies would suggest this is the main target area.

Reports received include: SUN 23.11 at 01.30 on 8140 - repeated at 02.30.
TUE 11.11 at 23.30 on 6972 - for ID 296.

E18) 'EDNA SEDNITZER' ENGLISH VERSION mode LSB //G22//S4//M13 -See also M13.

This is a particularly difficult station to keep track of due to its less than pure LSB signal and slow delivery. The use of the incremental serial number does, however, help. It is at least possible to know how many messages you have missed! On WED 13.8 the station adjusted its format to bring it into line with M13. Previously the ID was only given 4 times before the repeat. This is now given 12 times. Unconfirmed reports suggest that this station is transmitted from Bulgaria. Comments welcome. See also news about sister station G22 and Morse section M13. The transmissions we are aware of are:-

2nd WED of the month	21.00 ID 307	AUG was 8025 & SEPT 6545
3rd THU of the month	05.00 ID 718	No logs
2nd THU of the month	21.00 ID 307	No logs (Repeat)
3rd FRI of the month	06.00 ID 718	No logs (Repeat)

E22) ARABIC MAN 2LETTER/FIGURE Mode AM NEW

This is a new signal and was first noted on SAT 20.9.97 at 14.05 on 17385 the very strong AM signal consisted of a male voice in English with thick Middle Eastern accent slowly repeating FOXTROT DELTA SEVEN over and over until 14.10 ended abruptly. Another report was also received without the exact frequency the following week when the station was noted in the 14 MHz area repeating FOXTROT DELTA NINE. So far no messages noted as such. Reports appreciated.

GERMAN LANGUAGE

G2) SWEDISH RHAPSODY Mode AM/SSB //M4

The details below represent additions only to the incomplete schedule published in issue 13. Remember, week 1 starts on the first SAT of each month. No transmissions on FRI. Transmissions in winter on 6200 will move to 7314 for summer. Transmissions on 5748 for winter will move to 6200 for summer.

No information received with regards to our previous question concerning the use of the UUUU LOLO-MCW call marker. This station still requires a dedicated monitor to conduct systematic monitoring and work on the station's habits. Any volunteers? Help will be provided.

Additions only to Issue 13. Please update the schedule published in 13

DAY	TIME	FREQUENCY		WEEK NUMBER				
				1	2	3	4	5
SAT	12.00	6507	ADD		*3	*3	*3	
SUN	10.00	8188 SSB	ADD					*3
SUN	19.00	3824 SSB	ADD	*				
MON	19.00	5340 MCW	ADD			*1		
WED	16.00	5748	ADD				*3	
THU	18.00	4195 SSB	ADD					*
THU	19.00	5340 MCW	ADD		*1	*1	*1	
THU	22.00	3238 +	ADD			*		

+ New Frequency

G4) 3-NOTE ODDITY Mode AM //M29A (1 hour earlier in summer - UTC shown) - see also M29.

Still following the monthly frequency changes for each schedule. This station likes to keep a low profile. Looking at the 1996 v 1997 frequencies for the 21.05/21.35 transmission, they have changed - possibly due to the publicity given to the station in ENIGMA. Transmissions noted:

	JULY	AUG	SEP	OCT	NOV	DEC	JAN
<u>SUNDAY</u>							
	20.05/3930	20.05/3935	20.05/3915	20.05/3315	21.05/3265	21.05/3255	3255
	20.35/3830	20.35/3835	20.35/3815	20.35/3215	21.35/3165	21.35/3155	3155
<u>MON WED & FRI</u>							
		09.15/5185	09.15/5627	?	09.15/5425	?	?
		14.30/5127	14.30/5508	?	14.30/5108	?	?

G6) GERMAN LADY '00000' ENDING MODE AM //S6 Family
See S6 for further details.

MON 19.00 & 20.00 SAT 20.00 EACH WEEK
TUE 19.00 & 20.00 IDs noted: 120 122 294 295

G7) GERMAN LADY '000 000 ENDE' Mode AM //S7 Family
See S7 for further details.

The transmissions noted each week at the following times:

TUE 06.00 THU 06.30 FRI 18.00 (19.00 Winter) SAT 06.00
TUE 06.30 THU 20.00 SAT 08.00 (09.00 Winter)
THU 22.00

The FRI transmission is the same message as the SAT one but with a different ID.

SUN - A monthly schedule is also in use at 07.00 (08.00 Winter) and operates on the either the 2nd or 3rd SUN - bizarre scheduling means the transmission was noted on 13.7 (WK2) 17.8 (WK3) 12.10 (WK2) 16.11 (WK3) !

IDs noted: 124 140 213 167 218 398 419 384 519 522 562 577 621 764 771 804 841

G11) STRICH Mode AM //E11//S21//M3/M20 - See also M3

Weekly TUE 21.00 3823 4015 4780 or 5050 depending on time of year, ID 752
Weekly WED 06.00 6750 or 7580 (other frequencies not known) ID 496
Weekly WED 08.00 6430 or 7840 (other frequencies not known) ID 752
ID 496 is also used by M3.

Once again special ID '121' was active for a short while in Mid-August, this time in German. 121 always sends a message and can often be heard several times per day over a short period. 121 is also a special ID used by M3. 121 was noted sending messages on 5610 and 5625 on consecutive evenings. 121 group counts vary widely.

G16) GERMAN TWO LETTER STATIONS Mode SSB//E16

English language transmissions seem to be the order of the day for this network (see E16); the only calls heard in German are GOLF KILO and WHISKY LIMA. GK is still active and noted at the following times;

19.00 19.30 20.00 21.00 & 21.30 depending on the day of the week. WL is also active on TUE at 20.00 & THU at 19.30. GK & WL would seem to be broadcasting into Europe/CIS while E16 seem to be targeted further afield. Frequencies are selected from a list (also used by E16). Full list of known frequencies; 2690 2707 2745 3228 3262 4543 4594 (4821//4888 AU) 4888 5015 5182 5732 5770 6370 6765 6853 7404 7532 7661 7740 7752 7858 8063 8173 9040 9325 9450

10170 10460 10500 10740 11108 11545 11617 12092 12210 12314 13362 13413 13752 13775 13890 14622 14945 15610 16055 16620 16414 17430 18195 18575 19295 19755 20240 20350 20675 22885

Those underlined in GERMAN & ENGLISH give a good indication of activity. Finally! I had a call from Mike Chace at his new location near Philadelphia. He was listening to a TWO LETTER station on SAT at 14.10 UTC in GERMAN (UTC-5 in the USA) on 16414 - I tuned in and, although I could hear the signal down the 'telephone line', the frequency was clear in the UK with no sign of the signal! What does this tell us....?

G22) 'EDNA SEDNITZER' - GERMAN VERSION Mode LSB //E18//S4 //M13 - See also M13.

This is a re-activation and is the German language version of E18 & S4. E18 is still around - see this issue. A difficult one to find. Poor LSB and long spaces between words makes finding it quite a task. We have received only two reports.

TUE ? at 22.00 on 6683
THU 18.9.97. at 22.00 on 5119 -

Interestingly two monitors heard the same transmission and reported it. It is not known if these are weekly, fortnightly or monthly transmissions. Will normally change frequency each new month.

SLAVIC LANGUAGES

S6) & S7) RUSSIAN MEN '00000' & '000 000' ENDING, Mode AM - See also M12 & M14.

S6) FAMILY: E6//E17?//G6//V6//M14/S25
S7) FAMILY: E7//G7//V7//M12/XPB

S6) Along with E6, G6, V6, & M14, sends all messages using PAIRED groups. Uses regular time slots but frequencies are selected from 'windows' e.g. fixed areas of the band. Messages are repeated on a different frequency following first airing or on same freq/time slot on following day. Schedule is ID specific & well organised. Transmissions may appear at the same time and frequency up to one year later. IDs noted are listed below.

S6) 314 254 396 482 537 604 632 642 691 732 796 826 852 912 919

S6C) SINGLE 5F group format was noted 17.6 at 17.04 on 12190 repeating group '11213' and also on 23.07 at 23.00 on 7690 repeating group '11319'. So far S6C has always sent groups of the form 11X1X.

S7) Along with E7, G7, V7, & M12, sends all messages using SINGLE groups, uses 3F or 4F decode key. Each transmission is usually repeated on 2 further frequencies. Nil messages are repeated only once. Frequencies and IDs are changed each new month on most networks, but not all.

S7) IDs noted: 283 394 391 498 642 654 641 Note: In past few months ID 394 has also been used by V7 and E6.

S10C) CZECH LADY Mode AM //M10 - See also M7 & M10

This station continues despite the demise ^{of} OLX in the Czech Republic. Several regular time slots are in use at present although the frequencies seem to be subject to change. Two messages are sent weekly - repeated 3 times. A message to 541 is sent weekly. A message to 109 is sent monthly only, - on 1st TUE of each month. Messages for 247 are sent during the following weeks of each month. (As with M10, these IDs are not schedule numbers but addressee numbers and remain constant)

TUE & WED

06.30 4958//? replaced by 4485//4030 and in NOV replaced again by 3352//2805
15.30 3383//4485 (All good signals in the U.K.)

S12) 'CHERTA' mode AM //G11//E11//M3/M20 - See also M3.

Still active but like all family members is prone to sudden frequency changes.

Try 1st & 3rd WED of Month 21.00 4015 or 5180 ID 971
Try 1st MON of Month 21.00 3823 or 4465 ID 755

S13 & S14) RUSSIAN COUNTING MEN & WOMEN mode AM/SSB

S13) This station was noted with 'live' counting and phrases at 20.00 on 4886 TUE 4.11 but not noted since. Most transmissions of short duration.

S14) Loop tapes of counting and IDs are still present although audio/broadcast quality is often poor.

'Klever-75' noted on 4064 & 'Bouket-18' on 4040. Unidentified loop also heard on 4727. All heard in Europe during evenings.

S16) OLX //M6 OLX - See also M6

Just as ENIGMA 13 was going to print, OLX left the air. The last transmission was noted on AUG 2nd on the single frequency of 9320. One possibility was perhaps the severe flooding which affected 538 towns and villages according to an external Czech Radio report - but nothing noted since.

However, the answer is perhaps less an act of God than one of the Czech Government! The following article appeared in "Intelligence Monitor" - CZECH REPUBLIC In late August sources in the Office for Foreign Relations and Information (UZSI) indicated that the service is preparing to close. Reasons cited for the closure were lack of national security risks, poor performance and a lack of interest in the service on the part of politicians. Government officials have refused to accept the resignation of Oldrich Cerny, UZSI Director. He reportedly tendered his resignation because of the disappearance of a laptop computer purportedly containing secret data in May. The information was later determined to be open source material on economics (we wonder!) Acknowledgements to Ben N.Venzke.

OLX which transmitted on every hour for 23 hours per day is now off the air. We will keep you posted of any further developments. OLX was the World's only ITU-registered numbers station.

S17) CZECH LADY "CONTROL" Mode AM

No changes noted.

DAILY 13.55 to 14.02 4485//5027 ID always 313 - single non-random 5F 'message'

S21) RUSSIAN LADY Mode AM //M45/M1/M50 - See also M45

After several years of maintaining regular day/time/frequency slots the schedule changed several times in a short period of time. Regular MON & THU at 19.45 seem to have been dropped and other transmissions changed. Those noted recently are detailed below. Also // frequencies introduced for first time.

<u>TUE</u>	<u>THU</u>	<u>SAT</u>
17.40 5740 replaced by	17.45 5740 replaced by	08.15 5075//? <u>OCT</u>
18.40 4854//4454	18.40 4854/4454	Call 705
Call 454	Call 454	09.15 4832//?
18.40 replaced <u>NOV</u>	18.40 replaced <u>NOV</u>	Call 384
3323//3821 Call 323	3323//3821 Call 323	

S25) RUSSIAN MAN "CONTROL" Mode AM /S6 FAMILY

DAILY at 08.00 on 14890 ID always 615
08.20 on 11270*

* May not move here if 08.00 message is non-standard i.e. S25A/B. 11270 may or may not be used thereafter. I have had several reports of slight frequency changes. On OCT 27th it was reported on 14980 and NOV 9th it was reported on 14895. The signal which is reported to be transmitted from the Moscow area is reported to be very strong in Georgia with a possible target area of Chechnya or the Caucasus. Variants S25A/B have been very infrequent in recent months.

(S27, S28 - see page 21)

OTHER LANGUAGES

V2) SPANISH LADY 2 or 3 'FINALS' Mode AM //M8 - See also M8

Still very active with the majority of transmissions between 00.00 and 10.00. Widely heard in North America and Europe, most transmissions consist of 3 X 150 group messages totalling 45 minutes in length. Transmissions noted at following times:

<u>MON</u>	<u>WED</u>	<u>THU</u>	<u>FRI</u>
02.00 8186	02.00 7890	03.00 7485	02.00 6983
03.00 8182 6855	03.00 7405 7368	04.00 7580	03.00 6767
6826 5800	6826	05.00 6797	04.00 4028 4497
04.00 6768 5117	05.00 9153 7726	07.00 5417	04.00 6255 6768
05.00 8012 6826	06.00 9238 6786	10.00 4026	11.00 6983
06.00 6795	08.00 8975	11.00 6983	23.00 11568 8013
07.00 5417	<u>SAT</u>	<u>SUN</u>	<u>SUN</u>
07.45 9270+	00.00 10129	05.00 7726	10.00 7946
09.00 6826	09.00 6768	06.00 6786	15.00 7580
10.00 10511	02.00 5762	07.00 5417* Always a good signal in UK	

+ Unscheduled transmission

V5A) COUNTING SPANISH 4F ES family

Just one report received.
Possibly daily 02.00 9222

V6) SPANISH LADY '00000' ENDING Mode AM //S6 Family

See S6 for further details.

Regular slot noted on FRI at 20.00

Also one report of a transmission on SUN in OCT at 13.00

IDs noted: 174 365 461 802 848

V7) SPANISH MAN '000 000' Mode AM //S7 Family

See S7 for further details.

Regular Time slots MON 20.00 THU 06.00 THU 07.30 & FRI 20.00

IDs Noted: 024 130 159 394 407 519 578 609 621 710 891

V8) EASTERN MUSIC STATION Mode AM /E9

Although sister station E9 appears to be off air at present V8 was noted sending a once monthly transmission on JULY 5, AUG 2, SEPT 9, NOV 8 & JAN 3. The NOV transmission was noted at 19.00 but all others at 18.00. All using 6645 kHz +/- 5kHz.

The AUG transmission started at 18.05 with the tape at half speed making the female announcer sound like a male. After considerable problems the whole tape was replayed at the right speed commencing at 18.10.

A letter from Paul in London answered our question mark against the Arabic for the number (0), which is in fact sifr, the 's' being pronounced hard with an inflected guttural. He also goes onto tell us the multiple numbers of greater magnitude are easy to realise:

ten: ashara, eleven: ashar, twelve: itna ashar, thirteen: talata ashar, fourteen: arba ashar, fifteen: khamsa ashar and so on.

Twenty: ishrin, thirty: taltin, forty: arbain, fifty: khamsin and so on.

Hundred: miya. (one hundred wahid miya) Thousand: alf. (two thousand: itnein alf) The word for end is taraf while that for finish is khaloss, the kh being inflected with a slight guttural. Repeat is KaRrar, the capitals being raised in tone as spoken. The Arabic that appears to be used here is of Yemeni basis, there being certain differences in the more classical Arabic spoken elsewhere.

I have not received any reports of the FRI 08.20 or 09.20 monthly transmission on 11290 +/- 5 kHz, in recent months this frequency began to carry Iraqi Radio broadcast and also seems to have been used in the past by 'Mother of Battles' radio also from Iraq. Another reader wrote to tell me that he felt that he had heard the YL from V8 elsewhere and it was possibly on this station during the Gulf War. It is also note worthy that similar poor modulation and broadcast quality can be associated with V8 and broadcasts from Iraq!

V13 NEW STAR BROADCASTING Mode AM

Known operating frequencies are 8300 8375 (new) 9725 11430 13750 15388

Although reported strong in Asia only weak signals heard in Europe. Noted in Europe on the 8300 and 13750 as early as 11.00, best reception seems to be on 8300 around mid-afternoon and also at 22.00. Further news about this station on our Letter pages.

NORTH KOREAN-Via Radio Pyongyang, Mode AM

These and other as yet 'unclassified' Far East based operations are often difficult to hear in Europe and even more difficult to identify accurately.

Radio Pyongyang is still sending number messages and recent reports are detailed.

NORTH KOREA - Via Radio Pyongyang - continued.

Irregular 12.00-12.30 5863 also noted on 5870//4770
between 14.00-17.00 on any of the following
3250 4700 4770 5715 6215 6250 6400 or 6715

V16 CHINESE Mode AM

A possible V16 was noted on 6510 at 14.20 on WED, OCT 8. Sending following phrase: 1st phrase Shan Tai x3 2nd Un Tai x2 3rd Woo Shoo ending at 14.26. This format does follow previous V16 traffic and was heard in Australia.

XPH) HIGH PITCH POLYTONE Mode AM /S7 Family

Still following the fixed S7 type schedule with frequency changes each new month. The complete schedule for 1997 (no guarantees for 1998) for the TUE and FRI networks were:

TUE & FRI each week 21.00 Winter 20.00 Summer. Repeats at 20 & 40 minutes past hour. Null messages repeated once at h+10.

JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
5754	5754	6959	10423	12219	13442	12219	12132	9911	6959	5431	5754
5254	5254	5859	9123	11019	11542	11019	10832	8111	5869	5131	5254
4454	4454	5259	7523	9919	10242	9919	9132	6911	5259	4031	4453

Several other networks are also running - although we do not have the schedules so well detailed. These are WED/ AUG 06.00 11072 9472 and 8172 and FRI 07.00 8140/9140/10140. At present (JAN 1998) the WED 07.00 transmission is on 9426 10426 and 11426.

V20) LAZY SPANISH MAN Mode AM Format not known.

This station does not tend to be heard in Europe and seems quite rare in the USA. One report of the Lazy Man noted on SUN 16.11.97 at 15.05 on 6868 with what were described as a few counts! Another unknown format is a station referred to in the USA as 'The Cuban Babbler' this was reported on SAT 22.11.97 at 21.00 on 5688 (reported to be a common frequency for this operation). It is very important that both the above listed stations are correctly and fully described so a record can be made of their formats so correct identification, habits and operations can be collated.

X6) THE 6 TONE REPEATING mode AM

This signal is as active as ever although no schedule has ever been established. We would always advise to stay on the frequency after the tones end. Sometimes a short burst of Morse is heard followed by an FSK message. We note from reports that these signals seem more common in Europe. Does anyone have any new ideas on these signals?

Acknowledgements to British DX Club (BDXC), Short Wave Magazine, BBCMS.

May we take the opportunity to thank all our readers whose contributions large and small make ENIGMA possible. Your letters, logs, clippings, news and information is very much appreciated. Thank You.

MORSE STATION NEWS

Welcome to this, the last Morse news column in its present form. As from ENIGMA 15 Morse and voice news will be combined in a single Station News section. This is quite a radical step in the evolution of the newsletter, and a few words of explanation may help readers to understand the reasoning behind it. The separation of numbers stations according to nothing more than style of delivery has increasingly appeared irrational, unrealistic and unwieldy. This separation into two (almost arbitrary groupings) is based on grounds which are completely irrelevant to the overall view of the operations and activities of the agencies concerned. From the agencies' point of view, the fact that a message is sent in voice or Morse is a mere technicality; ultimately, what matters to them is that the message effectively reaches its recipient.

When we first started investigating Morse activity it was covered by a separate column supplementing an existing Station News column - which had to be renamed Voice Station News. Since then, we have successfully been able to identify more and more Station Families, and nearly all stations can now be grouped into families - where boundaries between Morse and voice simply don't apply. The historical origins of our present system of two groupings created a habit which has now outlived its usefulness. Readers cannot see the full picture without reference to all other entries within that particular family. E.g. Reading of S21 activity in this issue gives no indication of the true activity levels of this large and complex family; similarly G7's recent activity cannot be viewed in isolation: reference also to E7, S7, V7 and, not least, M12 and polytone XP is necessary. Taking all Russian activity into account, we also need to look at S6, E6, G6, V6, S25 and M14 - at least.

The really big news this time round has been the demise of two major station families. The agencies responsible for DLX and the NNN(E12)/M2 families have now, it would seem, disbanded. As these stations were both extremely active, and easily found they represent a major loss to the HF bands. DLX with its hourly transmissions on three parallel frequencies was useful as an accurate time signal and propagation indicator! M2 was probably the most strongly received numbers station in Britain; with its overwhelming signal, its presence could be detected up to 25kHz away by its distinctive unsuppressed key clicks - impossible to miss. However, there is more to say on these recent losses, and they will not be forgotten in future issues of this newsletter.

M1 'A' Network - Seasonal Schedule Group numbers (025,197,463). Behaving generally as predicted. Christmas falling on a Thursday this year had no effect on the schedule, unlike last year, when transmissions appeared instead on the

Wednesday. This year EoM transmissions (M1A & B) went out as usual on 25.12, with live two-way communications as always. An up-to-date table of EoMs which was promised for this issue has now had to be delayed due to lack of space. There have been a few oddities over the past few months. An unprecedented 60 group message was sent on the Sat 15.11.97 transmission; until then, the highest was 48, 40 being the usual 'A' GC. On Thu 22.1.98 M1 seemed to have problems; no transmission was sent at 1800 and at 2000 the date of compilation was sent as 18, not 22. This has never happened before. 'A' messages are always compiled on the day of transmission, however, in this case, Tuesday's transmissions (20th) were compiled two days later than this single Thursday message's date. Schedule group 463 will resume in March: 1800 Tue & Thu: 5474, 2000 Tue & Thu: 5017, 1500 Sat: 6261, 0700 Sun: 6508kHz. EoMs: last Thu & Sat of months.

'B' Networks - Schedule Nos: 053 103 136 254 271 298 302 325 382 419 510 514 594 638 684 719 756 805 871 913 931. All these schedules seem to operate for fixed periods, often several months. Some operate annual cycles. E.g. 053 operates April-October 1605 Saturdays on 5349. This is replaced during November to March by 325, at 1610 Sats. on 5240. All schedules have their own Usual GCs, i.e. 20,30,40 or 50. Many use two parallel freqs. and repeats over several weeks are not unusual. ('A' network never sends repeats).

M2 See introduction to this section. Last reported transmission: Thu 30.10.97 2100 4053 - Schedule 723, GC 20.

M3 The IDs used by this station do not necessarily indicate schedules, and are more likely to be addressee numbers. Since August, those noted, possibly all of them, were: 010 011 012 013 014 015 016 017 018 019, 035 038(new), 040 041 042 043 044 047, 182(new, but part of very old cluster, thought extinct!), 216, 284 287, 503 508, 741 742 743, 552, 584, 976. Commas separate probable clusters. Around 20% of transmissions send messages - GCs nearly always in 50s. Messages occur in pronounced flurries, a situation not easy to explain. Nearly always on hour or half-hour but sometimes at other times E.g. 284 has been appearing at 1015. A few years ago 284 was daily at 0430. 552 has recently used the M3A format: /333/00.

M4 See G2(Swedish Rhapsody) for known schedules.

M6 (DLX) See introduction to this section. Last day of transmission was probably at the end of July. On 29.7 at 2000 only 9320 appeared to be in use. Schedule 117.

M7 Schedules (weekly/fortnightly/monthly): 035 078 701 771 966(this also used by M10). Behaving as predicted. Same activity level.

M8 Like its voice counterpart, V2, an extremely busy station.

Best heard in Europe 0400-0900 in the 5-8MHz region. Transmissions are nearly all of the 45min triple message type. (each of 150 groups). The 5 figure header is not entirely random. Its last figure indicates the message repeat, and is always 1,2 or 3: first, second and third sending. The three headers are independant of one another, and a repeat transmission of one message may or may not include repeats of the other two messages associated with the initial transmission. Although we have compiled a basic schedule, i.e. transmission times and freqs., we have yet to unravel the message scheduling, which is much more complex. Another unusual characteristic of this station is to be found in the first and last two groups of each message. Group 1 is identical to group 149, and group 2 the same as group 150. However, these groups change with each repeat transmission - unlike the 'core' message - groups 3-148. The purpose of these changes is difficult to imagine.

M10 Whether members of this family are Czech or (now) Slovak is debatable. Occasionally M10 has used frequencies common to OLX (which was definitely run by Czech intelligence after the split of Czechoslovakia). It is therefore possible that the M10 family are still part of Czech intelligence, and not Slovak as has been rumoured. The habits of this family have not changed since Cold War days. It has always played a very different role to that of OLX. Schedules operate weekly, fortnightly or monthly. Some run annual cycles, i.e. several months on; several months off. Repeats are sent within the same week, up to 3 times, and do not carry over into next week. Normal scheduled transmissions use two parallel freqs., sometimes as little as 300kHz apart, and calls use the 555 triplet. Up to four addressees may be included in the same schedule, not all of which may be weekly, e.g 3 addressees weekly; the other slot being shared by two addressees alternating every other week. Addressee numbers often remain constant over periods of many years. Regularly active since July are: 049 086 107 109(also used by S10) 249 253 275 293 325 345(?special) 355 371 394(has a companion ID not yet known) 408 423 435 481 482 487 491 565 571 661 667 671 684 693 695 752 783 832 835 849 859 897 903 905 966(also used by M7) 983 988.

Unscheduled transmissions use 'special' IDs which sometimes are never heard again. Recent ones include: 241 345 522 552 628 811 894 922. These calls include triplets such as 111 333 444 777 etc. Split messages may also be sent, along with unscheduled M7s, during these busy periods. Some of these transmissions (M10B) use encrypted 5fig addressee nos. - these were again active in the 2nd week of Jan when several transmissions went out, each to four addressees, and each time using different 5fig headers, and the triplet 111. The best time to find these unscheduled transmissions is 0900-1200 in the 4 & 5 MHz bands.

M12 Extremely active lately, even more than usual. Schedules found since July: 087 105 114 135 139 151 154 168 171 192 259 304 315 321 326 387 415 416 425 427 478 486 521 560 578 604 628 631 658 691 696 719 721 726 731 749 751 781 791 812 815 825 826 845 851 872 874 886 895 915 931 946 963 972 975 985 993 and there are certainly more! The very long-running message 792/66 is still with us, using the ID 315 to the end of August, then changing schedule to 151 in September, and again in January 98 to 034. What is the purpose of this never-changing weekly message? There have also been some odd goings on with the 'special' 658 & 749 schedules, where they have shared messages with each other, and with the newcomer 815. A series of features on the Russian stations is long overdue. We cannot go into these in depth in brief news articles such as this.

M13 Still as frustrating as ever. Due to its secretive habits, this is a difficult station to keep track of. Unlike most stations this one neither keeps to regular freqs. nor even to freq. 'windows'. M12 for example, tends to operate in bands allocated to the fixed service (very occasionally venturing into BC bands). Its repeats can be found quite quickly with a fair degree of predictability, even when the exact freqs. are not known. M13, however, can secrete itself almost anywhere, in areas that most numbers stations avoid, e.g. in the middle of busy maritime bands. Schedules operate monthly, and repeat sequences vary depending on the schedule. We know that we miss many messages as the (usually) monthly incremental message serial numbers (which possibly also act as decode keys) give this away. Sometimes an ID may be lost for months only to reappear several messages later. The same frustration is caused by its voice counterparts' similar behaviour. Schedule numbers since July: 253 254 261 272 346 378 411 414 417 448 517 610 629 679 714 735 803 823 847 880. M13A variants (000 calls) have been noted on some 735 & 847 schedules. Most serial numbers have now reached the 190/200 mark, although one is lagging behind at 156 (346-in Jan).

M14/24 Active, but nothing like as active as M12. As schedules are often quite short-lived this station isn't very easy to follow. Since July: 193 203 325 362 385 396 426 464 571 633 642 695 738 771 786 826 863 987 906 937 971. A very low group count (for this station) of 18 was recently logged (193). Split messages appear from time to time - same single ID but different decode keys - follow on in same transmission.

M16 (8BY) Nothing new to report. Transmissions, as always, for 20 minutes, hourly at h+40. Two or three parallel freqs used: 7668 10248 12075 12170 12283 14433 14925 14931 18415 20946. Believed to originate from the Saint ASSise transmitter site.

M17 As E1 has undergone drastic changes, it is possible that

certain less drastic changes have taken place to M17's schedules. Since 1993, the following schedules have operated, not all of which are weekly (some operate on a week-of-month basis): 03 04 32 50 53 54 57 58 60 66 68 70 71 79 84 & 92. (these are first two figures of 5fig headers). It is not certain which of these are still operating - possibly all are. More work needs doing to sort this station out. Any volunteers? Repeat transmissions may be sent on same day, e.g. Weekly 53 schedule: Wed 0900 7425-6675-5865 is repeated at 1700 5865 -4740-4270.

M18 At present on 3802, continuously. Doesn't give up!

M20 Has popped up a couple of times recently, as always on M3 freqs. Sends string of Vs for 5min. followed by ==000.

M21 No change. Freqs. come and go between 3 & 7MHz but it's always somewhere to be found. Uses two or three freqs. simultaneously, but not always parallel. Rumoured to be Russian Navy, but no hard evidence exists.

M22 (4XZ) Still no further news on this one. Very active. Monitors needed. Rumoured to be Israeli navy, but why would they use 5fig codes in Morse?

M23 This one's a nightmare to keep track of. Several forms have been operating since July using the following 'IDs': 571 579 735 00000 11111 22222 & 88888. The record 579 schedule is still with us - it will be a year old next month - and has yet to send a message. Daily 0800 & 1400 on 8307//9285. When or if it ever sends a message the ID will change to one made up of even numbers. 571 & 735 have been around for short periods, 571 appearing at 1930 on 6928. (h+30 start is uncharacteristic for this station). More interesting than all these endless null message transmissions has been the frenetic activity on 6999, usually at 1100, but noted also at odd times like 1045 to be followed on by another message at 1100. These particularly active trs. have all recently been using the 'quintet'-type of call, usually for 5min. - 10min for null messages. Everything about M23 seems variable, apart from the quite conservative selection of regular freqs. used. Scheduling of the 'quintet' variants is very unpredictable and difficult to make sense of. Look out for a feature in the next issue.

M26/34 A rarity. Pops up without warning, and may remain on air for hours. Appears to send some kind of real-time status information. Most recent log is Mon 29.9 1700 on 4438 sending '98 02718 11111 11111'. Months of silence isn't unusual.

M29 (VDE) Three variants in operation. The basic one (M29A - no preamble) can be found daily, changing its message every Monday, and its freq. every month. The January freq. is 3270,

February's could still be in the lower end of the 3MHz band. M29, the original appears twice every Tue at 0700, repeating at 0730 but 100kHz higher, and changing messages and freqs. weekly - at present in the 5MHz region. The third variant, M29B, sometimes takes up this M29 slot. It differs in that extra figures appear between the GC and the time group, e.g. M29: 55 55 26 26 2 2 0800=(26x5F) AR M29B: 28 28 25 25 11 11 04 04 0800 0800 (straight into 25x5F) AR. The time group is the UTC+1 time of the first transmission. Repeats 30min later 100kHz higher. All messages are non-standard text.

M39 An occasional. Almost certainly related in some way to the M10 family. Active in the 4-6MHz region using two parallel freqs. especially around 0800-1200. IDs not used.

M42 (SOUD network) Still operating despite rumours of its closure. Although it may not be known as SOUD any more information is still being exchanged between Cuba and Russia, and certain CIS countries. Vietnam & Mongolia are also possibly still involved. Same procedures, formats and frequencies in use.

M43 (6XMB/C37A) No change, as far as we are aware. Has anybody any ideas/information on this network?

M45 After years of predictable, stable operation on 6780kHz the schedule (along with S21's) unaccountably changed for September. Instead of commencing at 1700 (1740 for S21), they both came on an hour later - 1800 (1740 for S21) and on different freqs. M45 was now using two parallels: 4555//4957 and using the unconventional ID (schedule No.) of 555. Throughout September the message remained the same: 1st group - 00000, last 30045. i.e. 46 groups compiled on 30th August. A new message began on 14th Oct (00000....14044). On 2nd November a new schedule began, with a new message compiled on 30th October: 1802 on 4022//3525 using the ID 525. A further new message was sent during December, compiled on 27th November. In January another new message is going out, this time compiled on 2nd Jan. These last two messages began with a random first group. Messages seem to be settling down to a monthly basis, although they are sent out every Tue & Thu. Since these upheavals began we discovered that the lower of the two parallel freqs., both for M45 & S21, have their last three digits in common with the schedule number being used. This was actually how we found the 3525kHz freq. The ID being 525, the other freq. had to be lower than 4022 and end in 525 whole kHz! Bizarre but true. This rule applies also to S21 - compare IDs 454 & 323etc.

M51 Still around with its very lengthy transmissions and 100% unpredictable scheduling. Due to this we can't say any more about it. French intelligence are rumoured to be behind this set-up; its inscrutability would certainly point that way.

M52 October saw several bursts of activity in the life of this mysterious visitor to the HF bands. E.g. Mon 29.9 - '10:934128', Tue 30.9 2000 - '10:251348 AR' 2010 - '55 55 55' 2015 - '10:240078 AR', Wed 1.10 0630 - '16:793544:28 AR', 0715 - '16:793544:28 AR', 0800 - '16:797484:28 AR' (all these on 4487/5019kHz).

M53 Last heard on its usual 2100 & 2200 8231kHz slots on 24.10, and has not been found since. It could easily have changed its schedule and been missed. It was never a strong signal in UK, and logs from elsewhere have never been received.

M56 Uses a long zero. This rarity was logged only once since July - Wed 8.10 at 1900 on 4876kHz sending: 2:06169 3:07362 5:06635 repeatedly for over an hour at 8wpm.

M57 NEW DESIGNATION Although so described, we did log this one a couple of times in the past, but it escaped our numbering system. Anyway, it has been logged recently by Vlad of Tblisi, on 25.11 at 0542 on 7942kHz sending ==8523==8523==8523.... repeatedly. This is all it seems to do although the 4fig number does change at some later point.

M58 NEW DESIGNATION but overlooked. On 11.5.97 at 0700 on 5750 this oddity appeared repeatedly sending for over an hour: === === === MIM III III III 84 (pause).

MX No great changes on the single letter scene. For more on the clusters, see feature in this issue. Fixed solitaries remain same as always: R - 3195,3323 & 4325. Irregular V - 3174. Chirpy L - 3091. Short-lived Ps and sometimes Cs have popped up on some of their usual freqs.

NEW VOICE STATION DESIGNATIONS

S27 Czech Lady II - details in next issue.

S28 The Buzzer! Yes, at last we can confirm that this station is no longer a "thing that goes buzz in the night" but a Slavic numbers station with very, very few messages. At 2145 on 24th December the endless buzzing stopped and was followed by a series of slow pips of a higher audio tone. These went on until 2202 when various announcements were made in Russian, using the same male voice as heard on the Russian counting stations, S13/14. These were followed by (possibly) place names (Rome, Paris etc.) and two 4fig groups. These numbers were read in a similar form of 'modified' Russian to that used by 'Cherta', S12. The whole was repeated, then

three tones of about 1kHz were sent of lengths 6,8 & 12sec. The pips resumed for a short period and were immediately followed by the familiar buzzing.

It is with thanks to Dove of Glamorgan that we now know that the buzzer is reserving a channel (4625kHz) 24 hours a day for years on end in order to send these extremely infrequent messages. He sent us a tape of what he heard. The audio quality isn't perfect, but we intend to get the whole transmission translated to English and will publish the result in the next issue.

It is interesting that this message was sent at a time when few official monitoring agencies in the West would be fully-staffed. On Christmas Eve (0102 MSK 25th Dec) skeleton staffs would be on duty, and knowing CSO culture, it's quite likely that this short message was completely missed. Is this fact significant to the timing of the message? Maybe. However, we doubt whether GCHQ will request a transcript as it would be an admission to a lack of attention! This wouldn't look good in the eyes of their puppetmasters, who Never Say Anything, and will remain nameless.

Since this episode, we have noticed that the distinctive variation which normally occurs at h+59 was appearing at h+24. This was continuing on one occasion when the 1724 'variation' was followed by the usual one at 1759, which resumed from then on. What all this means we have no idea, but certainly the Buzzer is more interesting now than it once appeared. It's now worth monitoring its monotonous output a little more closely.

Acknowledgements for piece on REM 4 (page 54) go to Vassily of Moscow and J. of Cheltenham who kindly supplied the Russian Military Dictionary. Published by GCHQ's JTLS we strongly recommend it. Unfortunately, it doesn't seem to have an ISBN number and not available at local bookshops. We have just noticed that it claims to have been the 'property of Her Majesty's Government'. (For the uninitiated, that absurdly pompous and archaic phrase is bureaucratic Civil Service jargon for 'British Government'. As such, we have returned the book immediately to 'J'). Apologies to our friends in Palmer Street.

Y330

ENIGMA Introductory Booklet

Due to the increasing demand for space in this newsletter we find that we cannot go on repeating details of station characteristics etc. from issue to issue. We've therefore decided to produce the above booklet, which will accompany the next newsletter. It will be especially useful for newcomers, who find difficulty in identifying and finding numbers stations. It will cover such matters as scheduling, formats and general station habits. Also included will be a complete station check list, along with advice on logging. We hope that it will serve as a reference source, to be used in conjunction with the newsletters, and that it will shed further light on the subject. Any suggestions for this booklet would be very welcome - but please send them in as soon as possible.

J - all details received 28.1 - use 237 for Feb, not as given. Rest remain same.
DZ - 111/13/9, 24/9, 10/10, 1/12, 4/12, 13/1, 30/1 333/000
PQ - 000

LETTERS TO ENIGMA

NEW E-MAIL ADDRESS <enigma.box@centrenet.co.uk>

A warm welcome to Issue 14. Happy New Year to all our readers around the world. Thank you for all your letters. We begin with an apology; the facsimile number on the cover of issue 13 omitted a digit for use when calling from outside the U.K., Tony faxed us - sorry everyone. The number, if you wish to send us a facsimile from outside the U.K. is +44 1274 779004 and from within the U.K. 01274-779004. As a form of punishment for this error we have had to transcribe a full day of Lincolnshire Poacher output!

At the time of printing we have a fault with the facsimile - we hope to have it operational again very soon.

May we advise readers of our new E-mail address, Mike in Kent takes over from Mike Chace who is now working in the United States. May we thank Mike Chace for all his help in the past.

Now onto your letters. Greetings to Alexander in Argathtakh, he heard about ENIGMA on the Moscow DX bulletin and tells us that he is a 27 year old TV engineer. Argathtakh is in the Polar region and is very cold in winter with temperatures between -45°C & -55°C. Alexander sends us information concerning SOUD - he tells us that the translation we carried in the last issue "system for the exchange of information concerning the enemy" was not quite correct and the translation is in fact "System for the unified registration of information concerning the enemy". We have received a considerable amount of information from two sources concerning SOUD and we will be starting a series of features about this operation in the next issue. Thanks to Ary at 'Worldwide Utility News' in The Netherlands and Andreas in Germany. Finally, it seems that SOUD transmissions have ended but have they been replaced by anything else? See page 20.

Hello now to Sytse in Groningen, The Netherlands. He tells us that he suffered from a coronary at the age of 46 and that some things are somewhat out of control. We send you our best wishes for a full recovery. He goes on to say that unfortunately he never seems to have enough time to contribute but enjoys reading ENIGMA.

Geoff writes from Middlesex with some feed-back to our Looking Back with 'D' feature in issue 12. He tells us that he was with 'Doug' Britten in Habbaniya, Iraq. "He was an operator at YI2AM (RAF Habbaniya Amateur Radio Club) when I was Hon Sec. of the club. I was to be a witness at his trial, but he pleaded guilty, as I was the operator at GB2SM (Science Museum in Kensington) when he met the Russian operator! -thus a lot of evidence did not need to be disclosed - all history". Thanks Geoff for some most interesting feedback.

Paul in London also mentioned Douglas Britten; does anyone know of his whereabouts and whether he served his full sentence? He goes on to mention that he read in a recent Obituary in "The Times" that David Bingham, who sold torpedo secrets to the Russians, with the help of his estranged wife Maureen, died as the

result of a car accident. In the body of the report it stated that Bingham had served only a very small portion of his sentence prior to his release. It was also mentioned that he used a *nom de guerre* to operate under since his early release. He asks if this is the norm for minor spies or is it accepted practice for all spies? Comments welcome. After all once a spy has been caught he has no value to his masters, other than as exchange material, and could only extend help to his captors in divulging to them the secrets that he had passed and to whom. It is almost certain that the spy would bargain for some pay back here.

Quick hellos now to A.H.O. in The Netherlands He read about ENIGMA following an article by Michiel Schaay in the Dutch magazine RAM. G.P.S. sent us some Single Letter Beacon Logs from Middlesex and greetings go to Vladimir who sends logs us from Tbilisi in Georgia.

Martin faxed us an interesting letter from Northamptonshire and raised several interesting points. He has recently hooked up to the Internet and wondered if spy networks could use the Internet to receive and send messages? The massive growth of the Internet in recent years has presented a whole series of problems for those who gather information either personally or professionally.

An article by Duncan Campbell which appeared in the Guardian Newspapers 'Online' section on September 18 1997 examined the whole question of Internet security. "Intelligence agencies in the US have stepped up their campaign to control the flow of information over the Internet. Lobbying by the FBI and NSA to a draft pro-encryption law known as SAFE (Security and Freedom through Encryption). The agencies and their political backers are now demanding that any American whose electronic communications cannot be read by US intelligence should, after January 2000, face up to five years imprisonment. Britain is looking at the same problem and the DTI's version is a network of licensed agencies that would provide (and keep copies of) everyone's encryption codes and keys. If sent a warrant, these Trusted Third Parties, or TTP's would hand over keys within one hour.

E-mail is less secure than an ordinary telephone call, since ordinary telephone calls are connected point-to-point by a precise route rather than being broadcast between routers and into networks.

All this leads to the point that, historically, huge code breaking resources have been used to try to break the codes of hostile states. But to use such methods and resources against the mass of ordinary international communications would be costly and futile.

The scale of NSA operations is staggering. Tens of billions of messages are intercepted every year. All International communications by satellite or undersea cable, and many domestic communications can be collected by taps or via satellite interception stations. GCHQ's interception station at Morwenstow near Bude, Cornwall, was built (funded by NSA) almost 30 years ago to spy not on the Soviets but on the West's international communications satellites, Intelsat .CSOS Bude is a major NSA base.

There seems little doubt that the security services of Britain and the US will win the day. Security officials are anxious to maintain the 'special relationship', after all EU adviser and ex-GCHQ official David Herson was astonishingly candid about the real reason for playing on the fears about the Net activities of terrorists and organised crime. 'Law enforcement is a protective shield for all the other governmental activities,' he told two European journalists. 'We're talking about foreign intelligence....that's what all this is about. Law enforcement is a smoke screen.' "

To answer your question Martin, it is certainly possible that intelligence service may use the Internet but it would be very risky. Number stations provide the best possible method of communication even in the high tech world. The transmission cannot be traced to the recipient! This is in stark contrast to telephones, facsimiles, E-mails and good old letters. Nothing better has yet been invented, this despite the fact that MI5 was intercepting mail back in 1914! *

We would of course be happy to receive any further information on E-mail security which may be of interest to other readers. You can view Duncan's article in full by visiting www.guardian.co.uk/online.

I have received from Paul in London, Mike in Kent & Chris in Westminster, USA a fine selection of E-mail addresses which may be of interest to those of you on the information super-highway (sadly, we are still on the hard shoulder).

We can recommend to all numbers fans Chris Smolinski's 'Spy Number Stations' pages. Chris's pages also use the ENIGMA reference number system and you can receive regular information via the reflector. The instructions for subscribing are as follows: Send an E-mail to <majordomo@qth.net> with the following one line in the body of the message: subscribe spooks.

Other address of interest to ENIGMA readers include:

Numbers Weekly Report (Chris) www.access.digex.net/~cps/numbers.html
Data Modes (Mike Richards) <http://dialspace.dial.pipex.com/mike.richards/>
Radio Communications Agency www.open.gov.uk/radiocom/

A visit to the Radio Authority (address below) website will allow you to order a copy of the 'Baldock Services Booklet' free of charge from the RA library (publication RA300). Needless to say they make no mention of their close collaboration with CSO stations.

Radio Authority <http://www.gtnet.gov.uk/radiocom>
CIA World Factbook <http://www.odci.gov/cia/publications/pubs.html>
HAARP <http://www.haarp.alaska.edu/haarp/haarpfactsheet.html>
Russian Sigint (Lourdes issue) <http://www.jya.com/rusigint.htm>

Jamming seems to be making the news with 5MHz beginning to sound like the

* Earliest UK mail-opening 'exposé': 1844

Cold War days again and several letters have arrived about the subject. Jamming continues to affect Lincolnshire Poacher and in recent months the use of several 'new' styles of jammers have been heard. It is quite distinctive modulated signal and is heard in the 4, 5 & 6 MHz region in the early afternoon and evenings jamming Iraqi clandestines. At present three transmitters using this modulated signal are heard. In the mornings and late evenings they can also be heard jamming Lincolnshire Poacher.

According to recent reports the jamming signals have caused problems to the UK rescue services by blocking 5680 kHz, causing a move to 4745 kHz. The UK Radio Communications Agency based at Baldock, Hertfordshire (60kms north of London) is the UK arm of the International Monitoring System. In case of interference they can take bearings and ask for cross-bearings to be taken by other suitably located administrations to enable a source to be located. The results are then passed to the International Frequency Registration Board (IFRB) for action. In the case of 'rouge' states this can prove to be a difficult task to deal with through diplomatic channels. Clearly no success with Iran re- Lincolnshire Poacher!

Now to Sussex and a letter from Brian. He starts by commenting on part two of our E10 feature from the last issue. 'Again, a well argued article on the possible set-up of the mystery message strings - undoubtedly the best theory on these signals so far. Possibly the groups could also indicate reception "slots" as well as transmission "slots"? Would this tie in with the irregular messages on Type 2 - Low traffic stations?

Given that either, or both, of these ideas are correct, could the number group following the call indicate an agent ID? For the example given in the article this would read:-

VLB	28	P14	Z36	B53	T20
Station	Message for	Freq			
Call	Agent 28	Time			

I am sure from previous study that each callsign serves more than one agent, (possibly with the exception of Type 3 calls), which would make it necessary to indicate a particular individual or group as the recipient of the transmitted message. Unfortunately, due to the huge number of frequencies and transmissions made, it almost impossible to make a definite link between Strings being sent, and the start or finish of a particular message or another of the stations transmissions. Perhaps if we persist with the monitoring and logging, we may just find the link one day!

On the subject of a possible link between Israel and South Africa, Brian sent us a copy of some material which appeared in the CIA World Factbook 1994. This shows that a trade link existed between Israel and South Africa at the time of the De Klerk administration, (when there were trade embargoes in place from the Western world), with South Africa shown as partner of Israel as regards to imports,

(Including Military Equipment etc). This would seem to strengthen the theory about Israel -SA links and cooperation.

Often the reason for two apparently unconnected countries to act together, are either idealistic - (such has occurred with communist régimes) - or religious ideals (such as Islam), or more likely, to obtain weapons from a third country, where an embargo on direct sales is in force.

Recent press reports suggest that Israel's global intelligence gathering activities continue. According to reports from Russia's Federal Security Service counter-intelligence department, Israel has stepped up intelligence gathering in Russia. Recent events illustrate similar problems faced by the USA, although Israel insists it does not spy on its ally. In 1996 however, the Central Intelligence Agency named Israel as one of six countries engaged in extensive economic espionage against the USA. The FBI is reported to be on the trail of agent 'Mega' who is believed to have passed sensitive information to Israel.

Latin America is an area of particular interest to the Israeli security services. Here attention has focused on the Paraguayan town of Ciudad del Este, near the Brazilian and Argentinian borders. The town, which has a growing population of Middle Eastern immigrants, is seen as a potential hideout for Islamist extremists such as those implicated in the 1992 & 1994 bombings of two Jewish targets in Argentina. Acknowledgements to Robert Lowry.

ADVERTISEMENT

Visiting London? The Imperial War Museum are running an exhibition entitled 'Code-Breakers'. ENIGMA (no, not us) and the code-breakers is the theme of a special interactive display at the Imperial War Museum London until 26 April 1998. Visitors can: Discover how codes have been created and broken throughout history. Learn about enemy codes in the Second World War and find out how the Allies cracked them. See an original ENIGMA machine which the Germans used to send top secret information. Transmit their own messages from a re-creation of part of a U-Boat. Try their hands at sending Morse code and take down a message at a Second World War listening post. Visit a mock-up of one of the huts at Bletchley Park, Britain's code-breaking centre in the Second World War. Further details from Christopher Dowling U.K. 0171 416 5310, Overseas +44 171 416 5310.

A few quick greetings. First, Doug in Leicester who finds ENIGMA 'intriguing and much appreciated' (thank you for the Christmas card). Hello to David in Carmarthenshire who describes ENIGMA as an 'excellent' newsletter (thanks also for the cassette tape). Our thanks also to Lars in Finsterwalde, Germany for your logs and information, and to regular contributor Gert in Zoetermeer, Holland. He sent us some very detailed observations about the Three Note Oddity (G4) which we will be merging with our own work to produce a more comprehensive feature.

Hello now to Bill in Sheffield. He ordered our back issues but they were delivered to a neighbour's house (even though addressed clearly) - I wonder what the

neighbour thought of them? But we're glad you did receive them in the end.

Greetings to Keith in Kent and thank you for all the detailed logs and observations. He has concentrated on the Morse transmissions which are really appreciated. From Kent to Takashi in Nagasaki, Japan. Again a fine selection of detailed logs received. Reports include strong signals from Cherry Ripe (E4) the Counting Station (E5) 8BY (M16) and New Star Broadcasting (V13). He also sends in a detailed report of Phonetic stations (E10) informing us that FTJ (7322) & MIW (12747) are giving very powerful signals in West Japan. The Single Letter Cluster Beacons (MXC) are also well received in the following cluster bands: 7039(F,C,P,S), 8495 (F,C,P,S), 10872 (F,C,PS), 13528 (C,P,S), & 20048 kHz (C,S) On 7039,8495 &10872 kHz four SLHFB stations heard simultaneously with good reception.

Now some questions from John in Derby. He asks - "would you please explain what the M and I stand for in the abbreviations MCW & ICW?" The answers are 'M', modulated carrier wave and 'I', interrupted carrier wave. The vast majority of Morse is unmodulated, but many number stations use a modulated Morse signal which makes it stand out from other signals. Some MCW stations key the modulation (e.g. M7), while others key the carrier (e.g. M1) - effectively MICW. This difference is useful in identification. Frequency and purity of modulation should also be recorded to aid in identification.

John's second question is: "could you please explain the numbers found after the asterisks in the (G2) Swedish Rhapsody schedule". This question was also asked by Ken in Poland. The answer then:

Swedish Rhapsody uses form traffic (messages of a fixed group count) *1- indicates one block of 100 groups. In transmissions with three blocks the configuration is 100 100 & 50 - indicated by *3. (Two block messages are not sent). Thanks also for the logs, John. Asterisks indicate transmission time/week slots.

In the last issue we mentioned Dominic who runs an independent production company composing music. He is preparing some tracks and had considered using some 'off-air' numbers material. He now informs us that after consideration he will not be using any direct off-air material. Following our appeal in the last issue concerning copyright of number station recordings, readers will be surprised to read that we received no response from station operators. Our next letter comes from Andreas in Landsberg, Germany. He sends us another very detailed report. Several items including Soud and a review of the book "The Man without a Face", the story of Markus Wolf (which will be held over until issue 15 due to a lack of space).

Andreas comments on a wide range of subjects including our features on both E5 and E10 stations. On E5 The Counting Stations he tells us the feature was well written by Peter, and on the subject of E10 Phonetic Alphabets he comments that the explanation for sending messages back through a 'radio window' was reasonable, though it is speculation. He does, however, add that this is one of the

few cases of speculation in which he could not find a weak point. He goes on to say that the system described would be quite feasible - if an agent was travelling, abroad the headquarters cannot tell him which frequencies to use too far in advance due to changing conditions.

Andreas is seeking some help in tracking down a recording of a radio programme and also a programme guide. Christian, a blind listener and very keen numbers enthusiast told us about a radio programme concerning Espionage-BND-MfS/verfassungsschutz which was broadcast in the early 1990s on the "Deutschlandsender Kultur's" series "Lange Nacht" (Long Night) between Friday night Saturday morning. Each programme was dedicated to a particular subject. In the programme, number stations were featured including recordings of the last transmission from the GDR. Due to massive re-organisation within Germany the archives have now been transferred to the German Broadcasting Archive. Despite several attempts, without the exact date or details of the presenters involved, the information cannot be retrieved. The other part of the task involves a special page about the "Long Night" in a monthly programme guide, but unfortunately we only have copies from 1993 onward. Can readers help? If we had the programme guide perhaps we could recover the archive recordings?

Andreas recently met Wolf Harranth (host of Radio Austria International's Intermedia programme). Wolf had recently returned from a trip to Taiwan to report on the media scene there. Included in his 4 part series was a piece about clandestine stations in which he mentioned that one was coming from the transmitter site of New Star Broadcasting, which transmits numbers messages.

From Taiwan to Malta and an interesting piece which was discovered in a 1973 copy of the AGDX-magazine "Weltweit Hören" written by Wolf Harranth concerning the situation in Malta and the then Prime Minister, Dom Mintoff. A paragraph reads: "There they are, close to the capital Valetta, the antenna masts of the British Intelligence Service, unused, as Dom Mintoff has sent the secret service home". Does that mean, that British Number Stations were transmitted from Malta until the early 1970s? Which station-does anyone know about our intelligence connections with Malta? Comments please? (Malta was once bristling with RAF Communications and SIGINT sites. Main SIGINT site was at Sigli - M.G.).

Greetings now to regular contributor Andy on Merseyside and thanks for all the E-mail logs. He asks a couple of questions. First, has anyone heard Cherry Ripe being jammed? So far no, the target is probably not yet known by counter intelligence services, however, if it is China as suspected then jamming may occur in the future. He also asks about 'quicker than normal' delivery by some Phonetic Alphabet stations. This is due to a unique system employed by all stations in this network which spread the delivery of messages. Depending on the length of the message the speed of voice delivery is varied to take account. So short messages are delivered slowly and longer ones more quickly. The speed can be varied from 6, 7, 8, 10, 12 or 15 groups per minute.

Hello now to Rob in Essex. He sent us a video recording about the Cold War and is also giving a 'talk' on number stations to his local Amateur Radio Club. If you're

in the SE of England you can also meet Rob at a separate meeting on WED 11th MARCH at Purfleet in Essex, full details in this issue -see end page of Looking Back With 'D' A Stitch In Time (this issue) -. Rob tells me his wife thinks he is 'numbers mad'!

No issue of ENIGMA would be complete without a greeting to Peter in Saffron Walden who sent us a fine selection of logs, you can also find part two of his article on the Counting Stations in this issue. He tells us about laws going through U.S. Congress which would outlaw any scanner which is capable of receiving a wide range of specified two-way communications including the civilian VHF airband-it provides for large fines and terms of imprisonment.

Peter adds that given the nature of "Globalisation" and the "New World Order" it may not be too long before the same measures are being called for in Europe.

From cold Essex to sunny Zimbabwe and Jonathan. He starts his letter 'Dear Enigmaticians' and sends us a detailed selection of logs and some interesting observations and news from his part of the world. He says our mention of the Rhodesian CIO was a surprise, though the acronym actually stands for "Central Intelligence Organisation". It is based in a 10-storey red brick building neatly nestled between two identical government office blocks twice its height. It's topped by a healthy array of HF, VHF and UHF antennas and discons, plus a couple of satellite dishes. (The US embassy has an even better spread including two rather large fibreglass huts, possibly concealing an array of fancy directional intercept antennae on rotors). The CIO, more commonly known as Charlie Ten, is probably structured along the lines of British organs in that it has a Director General as its head. It apparently has good relations with its British and US counterparts. It is regarded though as a political tool of the ruling ZANU-PF political party and more especially that of the president, Robert Mugabe, who has been known to attend a good number of weddings involving officers!

Jonathan also writes about transmitting sites and mentions the possible use of facilities on Ascension Island. It has been described as being covered in antennae and is currently used by GCHQ, which has recently had the number of its personnel operating there reduced due to increasing levels of automation, in monitoring. (Eds note. We have heard about a recent feature in the magazine 'Islands' on this facility and hope to obtain more details). Other possibilities on his list include US communications facilities in Australia, Guam, Okinawa, Hokkaido and the Aleutians. Comments welcome.

The links between Israel and South Africa go back many years. They jointly built and tested medium range missiles in SA and tested a nuclear device in an atmospheric explosion over the Indian Ocean in September 1979 (detected by a US recon. satellite). It therefore stands that if such levels of cooperation existed, then the use of a few HF-transmitters would have been of little consideration. In the case of the establishment of US facilities, I guess with the major changes in SA over the past years, it is now politically acceptable to allow this. The US and SA may have major policy disagreements (as in the proposed SA sale of advanced tank gun aiming devices to Syria, how ironic).

THANK YOU FOR ALL YOUR LETTERS - NEXT ISSUE JUNE 1998 -
CONTRIBUTIONS BY MAY 9th 1998. HOPE TO HEAR FROM YOU.

SINGLE LETTER CLUSTER BEACONS

by M.G.

I have used the term 'beacon' rather than the more commonly used 'marker' precisely because it is a more accurate description of what they are. Far from being frequency markers, these transmissions are actually propagation beacons which have for decades served Russian intelligence. Russian, almost certainly, as all the bits of information about them point in that direction - not that any of this amounts to positive evidence. Some of the apocryphal stories, supposedly originating in official circles may even be disinformation. However, the only shred of true evidence which virtually convinced me, was once to be found by the simple act of monitoring these clusters, i.e. the sending of Cyrillic characters, which made the theory much more likely. (In the light of this, we are strictly incorrect in the way we glibly name some of these beacons - by translating the Morse characters into the Roman alphabet and not the Cyrillic, e.g. what we refer to as 'C' beacons are really 'Ц' -ts)

Why am I convinced that they are not markers for communication channels? Two things convince me: over all these years communications have never been heard; the use of narrow cluster bands in which up to 13 beacons have operated simultaneously sometimes as little as 100Hz apart - a nonsensical way of marking comms. channels.

In 1984 there were eight cluster bands each 4kHz wide, and spread between 3.5 and 21 MHz. Since the end of the Cold War these have been slimmed down to only 1kHz bandwidth, and juggled about in frequency slightly, although there are now nine of these bands in use, depending on time of year. The new band at 4.5MHz, which emerged a few years ago, only seems to be active October to March. Many transmissions left the air near the end of 1989. However, occupancy has been much reduced; by 1993 only three beacons occupied each band (F,S & C), but last year a fourth was added - P.

Frequencies were/are as follows:-

1984	Present(nearest 1kHz)
Band A 3564-3568	3594 (winter only?)
Band AA -----	4557 (winter only?)
Band B 5305-5309	5154 (most recent to change freq:
Band C 6801-6805	7039 June 1995)
Band D 8645-8649	8495
Band E 10643-10647	10872
Band F 13635-13639	no change (13635)
Band G 17015-17019	no change (17015)
Band H 20991-20995	no change (20991)

The location of these bands in relation to Russian numbers station activity is significant, and I will cover this aspect in detail in a future article. It is often stated categorically that these transmissions are 'Russian Navy'; I have yet to hear any convincing evidence that this is so. Only bands A, D & G operate in maritime allocations (One being shared by amateurs), and this is because they are strategically placed in the spectrum. The Russian Navy myth originates in the confusion over the role of single letter transmissions taken as a whole. As I have explained previously, there are several distinct categories of single letter transmission (SLT). As their habits differ consistently, we must logically assume that their roles must also be different. To lump them all together, just because most of the time they sound the same and seem to be doing the same thing, is nothing short of naive folly. Each category is unique in its own way. Cluster beacons are unique in that they operate in significantly-placed clusters.

The Russian Navy myth probably has a basis in fact, but only in the case of one category as far as available evidence is concerned - this is the isolated, short-lived SLT, usually sending a 'P', often on two parallel freqs and often operating to a short or long term schedule. These are true markers and are often followed by short bursts of communication in Morse & RATT, and often include a well-known Russian Naval fixed station callsign. However, they're still unexplained and rather mysterious. Nor can we rely on Russian Naval personnel to know the full facts behind, for example, all P SLTs. P naval SLTs may correctly be transmitted from Kaliningrad but what about the cluster Ps? Even if they do come from the same sites they clearly don't have the same purpose.

Structure of clusters

Before the shrinking of the cluster bands, each band was made up of nine discrete channels spaced at 500Hz. If we number them 1-9 (channel 1 being the lowest freq) we find that the same letter tends to occupy the same channel in every cluster. For example channels B5, C5, D5, E5, F5, G5 and H5 were all occupied by the 'D' beacon - the mid-point of each band. Only in band A was this transmission apparently absent. The complete list of occupied channels was as follows:-

Band A, Channel 1 (A1) - V	B5-H5 - D
B1-H1 - unoccupied	B6-H6 - G
B2-H2 - S and F	B7-H7 - O
B3-H3 - C*	A8-H8 - Z
B4-H4 - P	B9-H9 - ..-- Cyrillic Ю

(A2-7 & A9 were unoccupied; S & F operated at different times; *C was also shared with S in band F, and with A in band G - at different times).

To complicate matters, certain transmissions used intermediate frequencies between channels. 'K' operated 200Hz above channel 3 in bands A,B,C,D,G and H. In band E this position (10644.2kHz) was replaced by an 'A', and in band F the space was vacant. Similarly, 'K's also operated 200Hz HF of channel 5 in bands C,D,E,F and G - but never at the same time as the Ks 1kHz lower. 300Hz above channel 6, Cyrillic 4 (---.) was to be found in bands B,C,D and E. Like the irregular V solitary SLTs this one sometimes mutated into L,D or Z, and sometimes on channel 7 (shared by Q) in band E. N appears 100Hz above channel 6 but only in band D.

This is the pattern as monitored in the USA, so therefore it's not the full picture, but it will give an idea of the complexity of these clusters. Band A was probably more fully occupied than given above but due to propagation on these lower freqs. other signals were not reaching USA. It is with thanks to William Orr that we have this information.

At present only four transmissions occur in each band: C,S,P and F. (M has also been reported from USA, but like F, it is not heard in Europe).

Crucial to the understanding and purpose of these beacons is the fact that each one has its own propagation identity. This strongly suggests that each cluster is made up of individual beacon sources at widely separated transmitting sites. It is this aspect which will be the theme of the next article.

LINCOLNSHIRE POACHER (E3) - continued from last issue M.G.

Message Periods - most message groups send only one message per message period. There are two such periods in each month - commencing on the 1st and 15th day of the month. However, for message groups D,H and I the number of messages per two-week m.p. can vary between 1 and 3 (D & H), and 1 and 6 (I). Msg.Grp. I, which may be aimed at exile groups in Britain, is by far the busiest, sometimes sending anew message almost every couple of days. By monitoring these three anomalous msg. grps. an indication can be made of activity levels, over a particular period.

It is important to remember that the transmission schedule (frequency/time) is weekly and based on day of week, and the message schedule is fortnightly and based on date of month - not day. Throughout 1994/5/6 D & H usually sent two messages per m.p., but in 1997 single messages have become more frequent, and no three msg periods were sent. Msg. grp. I was at its busiest between Jan and Oct 1995: 1 msg - 8 times, 2msgs - 4 times, 3 msgs - 8 times, 4 msgs - twice and 6 messages once - during the 1st-14th Oct m.p. Since 1st Nov 95 all I messages have been single, except one - 2 msgs during 15th-31st Jan 96. Table to be included in next issue.

E3 - LINCOLNSHIRE POACHER - PART TWO

Welcome to part two of our look at Lincolnshire Poacher. Following on from part one in our last issue perhaps, it might be a good idea to take a step back and take a look at the station's evolution.

■ EARLY DAYS - Little information exists about the very first transmissions from LP, however, the station was around in the 1970s. Back in those distant days of the Cold war LP used a male voice in A.M. to send messages and the tune was played non-electronically. Some of the early transmissions originated from HMGCC Gawcott in Buckinghamshire. We would be particularly pleased to receive any information about LP in its earlier life.

■ FORMAT - The LP we hear today is the product of a perverse sense of humour - making no apologies for its blatantly British origins! The familiar tune "Lincolnshire Poacher" is well documented in both Simon Mason's book *Secret Signals* and 'Langley Pierces' *Intercepting Number Stations*, but in brief its origins can be traced back as far as 1776. The song tells the story of a poacher who avoids the gamekeeper and takes a hare to a woman in a local town. The opening line of the song used by the station is "When I was bound a 'prentice in famous Lincolnshire".

The format is curious in giving away much of its origins but little of its secrets. Starting on the hour the signal sent in USB opens with the LP tune played twelve times followed by the 5 figure header read ten times with a pause between readings five and six. This whole process is broadcast five times giving you a total of sixty renderings of the tune and fifty opportunities to copy down that 5 figure group.

The distinctly British female announcer continues this preamble for 10 minutes, after which 3 pairs of chimes are sent followed by exactly 200 five figure groups. The five figure header and the use of 200 groups raises some very interesting questions.

The five figure header (like the one used by Swedish Rhapsody and various extinct stations) gives us few clues and probably represents an encrypted agent header and a flag to indicate the point at which the 'true' message actually ends and the message's validity. The encrypted header makes it very difficult to determine how many agents/groups/cells the system controls, unlike other stations which send messages to the same header for long periods of time.

The use of exactly 200 groups also draws a parallel with Swedish Rhapsody's use of this system. Form traffic creates its own set of advantages, and perhaps disadvantages, depending on your situation!

The recipient will of course be able to deduce the 'true' end of the message and simply disregard the rest of the transmission. The disadvantage from the sender's point of view is the need to send consistently long messages therefore using up time and money in the process (no problem for the F.C.O.!) From a monitoring point of view, both ENIGMA readers and the monitoring services of opposing countries are faced with an impossible task. Are the messages genuine or not, and if they are where do they start and end in the transmission? Perhaps the use of form traffic does have its advantages! But what if these transmissions are not in fact messages at all! The idea may sound unlikely but consider this possibility. You have your recipient in position perhaps in a very unfriendly country (no names mentioned) how do you ensure that he receives the one-time pads? The answer may be to transmit them to

him using fixed-length transmissions repeated over and over again in much the same way LP broadcasts are made. Still not convinced? The recipient takes down the transmission and then makes further adjustments to it by, say, the use of a 'key phrase' this then 'creates' a one-time pad received over the air. The question is which station sends the actual out-going messages which are then received and copied onto the 'off-air' one-time pad? Comments welcome. The start of the message being encrypted by the agent may coincide with the OTP at any random point within the 200 group block.

And what of the lady herself? A graduate of the 'school of the speaking clock' this mechanised maiden has certainly had more 'air-time' than our most famous broadcasters. Who else has a 45 minute programme 12 hours per-day 7 days per week (notwithstanding her clone on Cherry Ripe)? LP's only real British competition in the digital stakes is the voice of RAF VOLMET possibly a family member! But seriously, this lady is very widely heard on SW. Who is she? The answer to that we may never know but she is probably alive and well and living near Hanslope! The system, although sampled, uses a unique (in number stations, anyway) system of voice inflection giving a life-like appearance to something which is, to say the least, rather unexciting listening, unless of course you have the decryption techniques to read the message.

After all these tunes, chimes and the reading of exactly 2000 individual digits the transmission ends when a further six chimes are sent and the tune played a further six times - a pointless elaboration, or maybe a psyops artifice to taunt the enemy!

■ **EVOLUTION** - Earlier I mentioned that the LP we hear today is not the same as the one which was around in the 1970s. Indeed the present schedule has evolved from the late 1980s. Simon Mason reported hearing the present LP on 21 December 1988 when it was using - 6485//5422 from 17.00 to 22.00.

In March 1990 it dropped 6485 replacing this with 5756 in parallel with 5422. Later 5756 was dropped in favour of 8464. Eventually it settled on the following five frequencies:

15682//14487// ? anytime between 05.00 - 18.00 (probably a 3rd also, but not found)
9251//8464//7887 anytime between 15.00 - 22.00

The schedule continued to evolve until it reached its present output. The general build up continued from Simon Mason's monitoring detailed above and appeared to commence at 14.00 until 22.00 with another set of broadcasts beginning at 03.00.

Perhaps also significant was the introduction of a third transmitter operating with the initial two. Interestingly, few number stations use three transmitters to carry simulcast messages, those known to do so include OLX, 8BY, 4XZ, E10, E14 and Swedish Rhapsody. The only other station to use three transmitters to carry the same message (and then only rarely) are the Counting Stations, another victim of those jammers.

The use of these three transmitters brings me onto two important points about LP-the transmitter sites used and the jamming which this station attracts.

■ **TRANSMITTER SITES** - Rather like the CIA (E5) Counting Stations, LP has the resources and flexibility to change transmitter sites as circumstances dictate. Britain has always tried to distance itself from the idea that numbers are sent from UK sites. The most obvious location would be the Foreign & Commonwealth sites centred

around their HQ in the sleepy lanes of Buckinghamshire. Hanslope Park, no longer a large HF receiving site, has undergone considerable re-development in recent years and is well worth a visit if you are in the area. Nearby, transmitter site, Gawcott is now a shadow of its former self; all the masts have been dismantled and the buildings protected by a very high security metal fence. The other associated sites have been virtually rebuilt.

It would, however, appear that LP does have a more specific target area than say Europe & the CIS. The Middle Eastern countries would seem to be its present target and therefore transmitters are sited to give optimum reception in this area. British overseas interests are now so small that only Gibraltar and Cyprus still have a large military presence, certainly of the type required to keep away nosey number enthusiasts!

Cyprus has long been the most likely choice with RAF Akrotiri (Defence Communications Network Transmitter site) top of the list. Other likely named sites given to ENIGMA are the BBC East Mediterranean Relay Station (BEMRS) at Zygi and a further site at Gata. The BBC have always distanced themselves from the idea of any involvement with number stations, but I will just remind readers that staff at BBC relay stations outside the UK (now operated by Merlin Communications, the privatised World Service Programme Delivery Services department of the BBC), are not in fact employed by the BBC - they work for the British Foreign Office and always have done. But should you place all your eggs in one basket? We have had confirmation from two independent sources that at least one frequency is transmitted from the Arab Republic of Egypt Broadcasting Corporation site at Abis. We further understand that the U.S. Government have used the Abis site to transmit the 'clandestine' station Voice of Human Rights and Freedom for Iran. Right now, British Army exercises and U.S. special forces activities are taking place in Egypt. One possible explanation for the use of several sites is to create different propagational paths for the signal, after all, what is the point of using three transmitters from the same site if they are heavily jammed? This may go some way to explaining why one of the three frequencies is often louder than the others or perhaps not seemingly as heavily jammed.

■ **JAMMING** - Almost from the outset of the present format, LP transmissions have attracted the unwanted attentions of those jamming transmitters. Their efforts are somewhat unprofessional and perhaps with a little more care and attention, could do a decent job. Not since the Cold War have the SW bands seen so much jamming activity. Almost all the jammers we now hear in Europe emanate from the Middle East.

Article 48 of the Montreux International Telecommunications Convention States:

" All stations, whatever their purpose, must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other Members or of recognised private operating agencies, or of other duly authorised operating agencies which carry on radio service, and which operate in accordance with the provision of the Radio regulations."

However, this is a strong case of six of one and half a dozen of the other. LP is not a recognised service and Iran are probably not paid up members anyway! Iran would seem to be the most likely perpetrator of this jamming activity. Nearby Iraq is host

to a number of clandestine stations including the well known Voice of The Mojahed along with others in Saudi Arabia also hostile to Iran.

Jamming of LP commences usually at start up around 10.00 UTC. This continues until around 15.00 UTC when jamming stops. The jamming transmitters are then redeployed blocking incoming clandestine broadcast stations until around 20.00 UTC (or 23.30 Iranian local time) when these stations close. The jamming then resumes on LP frequencies until close at 22.45 UTC. This break in the jamming may not continue to be the case however, with news from a recent BBCMS intercept which quotes the Iranian news agency. A major new short wave transmitter site has been opened in central Iran at Sirjan with ten 500 kW transmitters and directional arrays installed by Telefunken. No doubt, rather like the former East European & Soviet Governments, 'if needs must' these transmitters could well be used for purposes other than international broadcasting. Another possibility could be that Iran is preparing for the arrival of the US-backed Radio Free Iran. The Senate version of the Foreign Affairs Reform and Restructuring Act of 1997 has allocated \$2 million for Radio Free Europe and Radio Liberty to operate a proposed Radio Free Iran. America never ceases to remind us all of the threat of Islamic fundamentalism and no doubt the CIA will be playing its part in the region.

The jamming stations are not really doing the job correctly. First, of course, there is break in jamming due to other more pressing matters (like keeping control of news and information from overseas) by blocking clandestines and as we detailed in part one, the use of LP's sliding schedule does much to avoid messages been blocked at all times. The second failing is the lack of care taken in jamming the correct frequencies - indeed a copy of ENIGMA would solve that problem. Often the jammers operate on the wrong frequencies leaving at least one in the clear!

■ DATA MODES - Listeners may be interested to note some FSK transmissions which are also sent on LP frequencies. These take place at about 48 minutes past the hour and usually consist of two bursts of about 1 minute duration. More detailed study of these signals is required.

■ MISTAKES - Few and far between seems to sum up this section. LP is very professional in its operations and we have noted little in the way of errors over the years. The only ones that spring to mind are usually associated with starting up on the wrong frequency - realising - and changing to the correct one within the preamble. On rare occasions a frequency may experience a loss of audio and this is sometimes replaced by a tone which 'bleeps' every few seconds until normal service is resumed, interestingly when we have noted this it often only affects one frequency while the others continue as normal.

■ APPEAL - There is still much to learn about LP and we would like to request any new information concerning 'the early days' sites, scheduling & operations plus data modes along with logs and observations.

■ ACKNOWLEDGEMENTS - Our thanks to all our readers who provided information for this feature. Also thanks to the BDXC 'Communications Magazine' BBCMS & SWM for background information.

SIMON MASON WRITES...

All times are UTC. All frequencies in kHz.

Hello again and welcome to another column in the ENIGMA newsletter.

■ First of all, I'm sure most readers will know the long awaited 4-CD set of number station recordings is now available. The ENIGMA team will be reviewing it, but I would like to offer my personal comments on this release. The major consideration has to be that Akin Fernandez has left a permanent record of a very obscure and little known subject, which otherwise would have been lost forever, only existing in a few disparate enthusiasts hands.

As certain stations fade into history, this is the most important point, to provide a resource for the future, so that espionage activity in general and the Cold War in particular can be viewed more completely. Obviously, there is very little commercial gain in this for Akin who had to "stick his neck out" and incur a considerable financial loss to bring this product onto the market for which I am personally grateful. (However, see ENIGMA review in this issue for critical comment.)

■ Now some news of a forthcoming CD-ROM review. The KGB-CIA World Fact book. I am aiming to obtain a review copy in time for the next edition. KGB-CIA World Fact book (Compton's New Media) Information, maps, etc from CIA and KGB: KGB/CIA WORLD FACTBOOK - The KGB and CIA wouldn't be caught dead without this CD-ROM handbook featuring government statistics, economics, political and diplomatic protocol, industry and the environment, geography, treaties, trade, drug traffic and more.

■ An Internet site in Finland was found recently, but unfortunately for our English readers, the text is all in Finnish. However, it is interesting to see the names that the compiler uses. They are all familiar to ENIGMA readers and it is surprising how far some name tags travel. Stations included are Lincolnshire Poacher, Cherry Ripe, Magnetic Fields, Swedish Rhapsody, The Counting Station and OLX. Looking through the text, the compiler tries to give a home to each station. The Lincolnshire Poacher, he says is on Cyprus, Cherry Ripe is on Guam and Swedish Rhapsody is either from Switzerland, Italy or Poland. There is a reference to this magazine as well as links to Akin's CD and Chris Smolinski's page. The picture on the top of the page is interesting; it is of a child with numbers in front of its face!

■ Some recent monitoring has turned up yet more of the 2 Letter-stations. A regular is "ECHO HOTEL" which is broadcast on some very strange frequencies.

For example:

TUE	WED	FRI	SUN
17.00	16.00	16.00	15.30 UTC
20240	20350	20240	19295 kHz

Bearing in mind that we are at the bottom of the sunspot cycle and it is now winter in the Northern Hemisphere, these are very high frequencies. Looking at a map of daylight areas for these times shows that the Iberian Peninsula is the only European region not in darkness. The places in daylight are the western part of Africa and the majority of the Americas. Given the very faint signal, it seems likely that the signal is intended for, or originates in, North America. The fact that EH is in English only reinforces this idea. The message lengths currently consist of 90-100 5F groups.

Two more stations in English are also active- "BRAVO-LIMA" and "DELTA-LIMA". DL was heard at 07.00 on 12210 in July 1997, however, BL seems much more active. In November 1997 it could be heard at 08.00 as follows: MON 12210, WED 14622, SAT 12314, and SUN 13890, BL has also been heard regularly at 20.00 on 11/12 MHz frequencies of either 11545 12210 12314 or 13413 every evening other than WED? The identifiers used include DL-131, EH-432, 437 and BL-129, 139, 257 and 448.

■ An interesting incident occurred on 25 August 1997, when tuned to 9251 at 21.00 in anticipation of the "Lincolnshire Poacher" transmission. Next-door on 9252 was an (S6 or S7) broadcast was under way. The odd thing was that LP did not start up until the (S6 or S7) had ended its message at 21.03.

■ As we all know, the only stations to be jammed at present are the LP broadcasts; however, sometimes I have noted that various Phonetic Alphabet (E15) transmissions have had warble jammers in the background. Thinking that there was possibly a clandestine station behind them I thought that systematic jamming of these stations was unlikely but, recently, there was jamming of both ULX stations at 17.00 on 4880 and 6270, so perhaps they are under threat after all?

■ Much has changed, of course, since the end of the Cold War and many stations have disappeared, some only recently. Looking through some loggings from the past years shows this best of all.

NOVEMBER 1990: A very rare incident occurred on 6840 at 23.00 when no less than three different Number Stations were broadcasting. The (E5) "Counting Station" (E10) Phonetic-Alphabet station EZI and the Rumanian language Skylark (V1) were all on together. To add to the multiple pile up, this was the time when the BBC World Service was using 6840 as a feeder frequency for the troops in the Gulf area. I can't imagine what the reception was like in the BBC's target zone.

As far as the 2 Letter stations are concerned, some very obscure transmissions have been noted. The vast majority sent their messages between 17.00-22.00, not surprising - since their intended audience was largely in East Germany and other Soviet bloc countries. However, there must have been some early bird listeners judging by the following broadcasts. WHISKY PAPA used to be a regular at 01.00 and 01.30 on 8173/9325/10177. CHARLIE NOVEMBER was on air at 02.00/02.30/03.00/03.30/07.00 on many frequencies. A JULIET UNIFORM

transmission was noted at 04.00 on 3228/5015. ZULU GOLF at 03.30/04.30 on 4543/5732 and BRAVO JULIET at 03.00 on 8173 was also noted. Who was tuned into MIKE NOVEMBER at 05.00 on 9325 or PAPA DELTA at 04.30 on 9040? Other strange schedules included ALPHA BRAVO, only ever heard at 10.30/11.00/11.30, BRAVO UNIFORM at 08.00/08.30/13.00, LIMA ECHO at 17.00/17.30 and ALPHA LIMA was only ever heard at 08.00/08.30. Looking at the full schedule one can see the listening habits of the recipients, and they must have arranged their lives around those radio transmissions.

■ Back up to date now, given the demise of OLX, just where do the Czech Lady stations S17 and S17C fit into the picture now? The daily 13.55 control broadcast has been on air for several years. Indeed when I requested a QSL from OLX, I also asked about the S17 station and the Czech Ministry denied having any involvement with it. They seem to have been telling the truth. (S10, M7 & M10 & M39 are also all regularly still active - it is hard to know whether they are Czech or Slovak-M.G.)

■ ENIGMA received some publicity around the world when I was interviewed on Radio Netherlands 'Media Network' programme by Jonathan Marks, recently. This is the third time that the programme has covered the subject of number stations in recent years and it included details of the Irdial Discs CD along with extracts of some of the more well known stations and even a recording of the Buzzer on 4625 kHz was featured. ENIGMA was also covered and our contact details were also given over the air. It is good to see an international broadcaster taking a keen and well balanced interest in some of the more obscure parts of the listening hobby, perhaps the BBC World Service might like to feature ENIGMA?

■ ENIGMA was also given a mention in the Guardian Newspaper in the UK on Thursday December 18 1997. Under the rather unfortunate title "Have a hammy Christmas". The somewhat light-hearted article written by Duncan Cambell was clearly aimed at the Christmas market. Leading in with the question - what do you give the nerd who has everything? How about a recording of endless numbers transmitted by radio stations that don't officially exist? The piece which appeared in the Guardians 'online' section is devoted to those on the information super highway and contained plenty of useful e-mail addresses, the days of pen and paper seem sadly numbered! The article did however partially redeem itself by explaining that in Britain it is still formally a crime to listen to numbers stations and went onto promote the recent CD of recordings and give details about ENIGMA.

◆ That's about all for now, until next time my best wishes to everyone.

Simon Mason...

■ Correction to information published in the Guardian Newspaper article mentioned above. It was stated that OLX had recently gone back on air and that the station was not registered with the ITU. OLX is off-air. The station was also the only numbers station to be registered with the ITU. These errors occurred at the editorial stage which was outside of our control and were not the result of incorrect information given by ENIGMA. (Eds).

NEWS ROUND UP - REPORTS OF INTEREST

► BRITAIN - SPY BASE PLAN - The American National Security Agency is to go ahead with its plans to install more "golf ball" domes at a signal intelligence listening station at Menwith Hill in North Yorkshire, despite concerns about the impact on a designated area of outstanding natural beauty. This will bring the total to 26, as well as numerous HF aeriels.

► RUSSIA - INTELLIGENCE SERVICE GETTING NEW PREMISES IN MOSCOW - The Russian intelligence services are to get a new and unusual centre in Moscow. A whole building in the Brateyevo area of Moscow will be occupied by officers of the Russian Foreign Intelligence Service. The building will be ready by the end of 1997, the MK-Novosti news agency reports.

TELEPHONE HOT-LINES 'BUZZING'

► RUSSIA - KOVALEV PLEASSED WITH RESULTS OF APPEAL FOR DOUBLE AGENTS - Federal Security Service (FSS) Director Nikolay Kovalev believes that his appeal to agents of foreign intelligence services to become double agents has yielded positive results. "Some foreign intelligence services have already responded to this by fully curtailing their espionage work within Russia. We believe it to be a big plus," he said in an interview published in the newspaper 'Moskovskiy Komsomolets'. Incidentally, we had several "phone calls of interest to us". Real material on various special services emerged," Kovalev added. The FSS director also made it clear that through such an appeal the counter-intelligence officers were planning to increase their ranks.

Those who decide to reveal their links with foreign intelligence services will, firstly, get rid of the permanent fear of being found out, and, secondly, as Kovalev put it, "people should be striving to work in an area of special interest to them. If someone opts for collaboration with a special service, this means that something pushed them to this. There is some motivation. We would like to make use of this motivation. If someone has a predisposition towards this work, they can develop it", Kovalev said, and repeated the telephone number (224-35-00) which the repenting agents should contact.

► RUSSIA - FFS "HOT LINE" FOR SPIES GIVES "FANTASTIC" RESULTS - The Federal Security Service's "hot-line" installed for spies to repent their wrong doing got really hot when 298 people called in one day. FSS Director Nikolay Kovalev told ITAR-TASS that the results are "fantastic". There were 298 calls and 80 of them were very serious. "he said "we feared there would be a lot of calls from mentally sick people, but there were none." Kovalev said that after he had come up with such an idea, two Western special services "froze" their intelligence work in Russia. He reiterated that the special services of "absolutely all countries" have lately intensified their work in Russia as never before. "I cannot remember a time when we would have had four spy cases in court in one month", the added.

Kovalev admitted that even ex-Soviet republics, especially the Baltic states, have been collecting intelligence actively. He said he was amazed by the miserable sums for

which Russian citizens agree to sell state secrets. "Just for nothing, for one or two thousand US dollars, they are ready to sell secrets which can cause Russian many billions worth of damage" he said.

► RUSSIA - FEDERAL SECURITY SERVICE OPENS FURTHER HOT-LINES The Chelyabinsk Regional branch of the Federal Security Service (FSS) has opened a telephone hot-line. "Foreign secret services are seen to be rather active in the Urals region. In 1997, the FSS directorate has stopped the activity of several foreign secret agents. Now every resident of the Region can report through the hot-line any evidence he has of "subversive acts by foreign intelligence". The FSS promised safety and confidentiality to providers of tips. Meanwhile, the residents of Nizhniy Novgorod have now followed the lead of Moscow with yet another hot-line. The introduction of the line follows heightened interest of foreign intelligence bodies in the former closed town (previously known as Gorkiy).

► UNITED STATES - GERMAN SPIES RECEIVED MESSAGES VIA CUBA -

Three Americans, including a former Pentagon weapons analyst, have been arrested on espionage charges, accused of passing secrets to the communist government of East Germany in a rare case of spying for ideology, not money. Kurt Alan Stand, his wife, Theresa Marie Squillacote, and James Michael Clark were arrested in Washington and Virginia and appeared in U.S. District Court in Alexandria, Virginia. "When the Berlin Wall came down Kurt Stand, Terry Squillacote and Jim Clark did not surrender or lay down their tools of their espionage trade," Thomas Pickard, assistant director of the FBI's Washington office, told a news conference. "They did not give up on bringing about the overthrow of the United States Government," he said. "When Terry Squillacote worked in the Pentagon, she sought other opportunities to access high levels of classified information to sell to the highest bidder who shared her Marxist ideology." All three are charged with conspiring to supply U.S. defence and intelligence documents to the East German intelligence service during the 1980s and, later, trying to pass additional material to the Soviet Union, Russia and South Africa. Mr Stand, 42, and Mrs Squillacote, 39, also were charged with attempted espionage and illegally obtaining national defence information during an FBI sting.

The offences are punishable by up to life imprisonment and \$250,000 fine, or, in some circumstances, death, said U.S. Attorney Helen F. Fahey, who described them as "spies for East German during the height of the Cold War." An FBI affidavit said each defendant was identified by name and by various code names, such as "Junior," "Jack" and "Tina", in records obtained from the former East German intelligence service, known as the HVA. They were trained in espionage "tradecraft" and received messages from East Germany spies via Cuba on short-wave radio while sending microfilm of secret U.S. documents to East Berlin. Mr Stand became an HVA agent in 1972 through his father, then recruited Mr Clark, 49, in 1976, the affidavit states. The FBI said Mr Clark was a member of the leftist Students for a Democratic Society and the Young Workers Liberation League, the youth arm of the pro-Moscow Communist Party USA. The agency said he once filled out a Selective Service registration form with a quote from Chinese Communist leader Mao Tse-tung that "a revolution is not a dinner party." Mr Clark was charged with resisting arrest in Berkeley, Calif., in 1969, and in January 1980 he applied for a job with the CIA but

was rejected as a security risk. Mr Stand was recruited while a student at the University of Wisconsin at Milwaukee, worked as an organiser for the Democratic Socialists of America and was a leader of the Young Workers Liberation League. In 1965 he attended a boy's camp in East Germany, the affidavit states.

Mrs Squillacote, who married Mr Stand in 1980, was recruited into the spy ring sometime between 1979 and 1981 and until January worked in the Pentagon as a lawyer and weapons-procurement analyst with access to classified documents, court papers said. She was a student at the University of Wisconsin at Madison and Milwaukee and worked from 1983 to 1991 at the National Labour Relations Board in Washington. Mrs Squillacote also worked as a "legal fellow" on the staff of the Senate Armed Services Committee from 1990 to 1991, before taking several positions at the Pentagon, including a senior staff attorney in the office of the under secretary of defence for acquisition reform. FBI surveillance captured Mrs Squillacote referring to the Pentagon where she worked as a "hell hole" and a "(expletive) concrete bunker." She had planned to seek a national security job at the Office of Management and Budget and National Security Council, the FBI affidavit said.

The defendants' activities were handled by East German spy master Loth Harri Ziemer, who was arrested in 1992 after Germany was unified and accused by the Bonn government of continuing to spy for Russia. Efforts to provide other material to the governments of the Soviet Union and later Russia and the Republic of South Africa after German unification were not successful, said Mr Pickard. In June 1995, Mrs Squillacote wrote to a senior South African government official who was also a leader in the South African Communist Party seeking "to initiate an espionage relationship" with the Pretoria government, the affidavit said. She referred to herself as a "Marxist and a communist" opposed to the system of "bourgeois parliamentary democracy," it said. The letter expressed her feeling that it is "disheartening" to live in the United States and that she wanted to vanquish "our class enemies" by using the tools "that they themselves have given us."

The FBI apparently intercepted the letter or was given a copy by South Africa and launched the undercover operation that eventually led to the arrests.

► RUSSIA - YELTSIN PARDONS FORMER CIA SPY - NUMBER STATION SENT MESSAGES TO AGENT WHILE IN MOSCOW Russian president Boris Yeltsin has signed an act pardoning a former Russian diplomat sentenced to seven years for spying against his country. Vladimir Makarov was sentenced by the Moscow city court to seven years in a high-security prison camp for "high treason in the form of espionage". Under Russian Criminal Code, Makarov faced a more severe punishment of up to 20 years in jail. However, the court took into consideration "his complete avowal of guilt and collaboration with investigators".

Makarov, a former counsellor at the Russian Foreign Ministry, was recruited by CIA agents during his posting in Bolivia in 1976, and was spying against the then USSR until his return to Moscow in 1979. During his next foreign posting in Spain in 1989, he restored his relationship with the CIA.

In a television interview shown in Russia, Makarov spoke about his activities working for the CIA and showed the radio which he was given by Bill Rooney in Bolivia, at

the mansion where they used to meet. He went onto explain how he used the Panasonic radio to receive coded messages in Moscow. But things did not go smoothly. After several failed attempts, agent Stalernate stopped receiving messages. When asked why he did not decode the messages received, Makarov replied that "an error must have occurred somewhere, or perhaps I received a wrong figure or subtracted incorrectly".

READERS MAY WISH TO SUBSCRIBE TO THE FOLLOWING ORGANISATIONS

► GERMANY - "AGENTS FOR PEACE CALL FOR JUSTICE" INITIATIVE GROUP

"Agents for Peace Demand Justice" (Kundschafter des Friedens fordern Recht) is an initiative group consisting of former MfS-agents in West Germany who are now fighting against the judicial system, which claim that espionage from former GDR-citizens inside the GDR on behalf of the FRG was right and espionage by the FRG-citizens in the FRG on behalf of the GDR was not.

The organisation produces a bulletin in ENGLISH the last issue covering the verdict in the Markus Wolf trial. In a statement they say: "The criminal prosecution of former members of East German espionage organisations is particularly presumptuous, when considering that the German Federal Government has arrogantly passed a law rehabilitating and indemnifying its former agents who had been lawfully sentenced for their intelligence activities under GDR criminal law and in conformity with international law. The German public is kept unaware and in disbelief of the judicial disparity of this policy regarding espionage mutually carried out between the two former German states. The German Federal Government - for obvious reasons refuses to give detailed information concerning the extent of this particular kind of "redress of SED (Communist Party of the GDR) injustice".

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► GERMANY - INTERNATIONAL INTELLIGENCE HISTORY STUDY GROUP

The International Intelligence History Study Group (IIHSG) publishes a bi-annual Newsletter in ENGLISH. They solicit the submission of conference reports, abstracts of papers read, information on opening of archival material, conference announcements, research questions, research notes, publications, personals, WWW sources, and other information that may be of interest to members. The Newsletter is published in August and December, at a cost of DM 60,00 for 1 year's membership.

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► IRAQ-THE AL HADI PROJECT (PROJECT 858) - I have received several letters asking about Project 858 and also a selection of newspaper clippings. Paul in London wrote enclosing a clipping from the Daily Telegraph "Iraqis spied on UN arms inspectors US claims" of 26 November 1997 which referred to "Iraq's 1000-man electronic eavesdropping agency". The SIGINT facility at Habbaniyah was operated by the RAF prior to Iraqi independence.

The Al Hadi Project (Project 858). Before 'Desert Storm', Iraq had an extensive system of ground stations for gathering SIGINT/ELINT. Despite damage to the system during the war, Iraq still retained a considerable capability. The organisation responsible for SIGINT/ELINT activities is known as the Al Hadi Project, or project 858. Its HQ at Al Rashedia was attacked during the war, but appears presently to be fully operational. According to informed sources, the agency has five other ground stations around Iraq. Al Hadi, whose chief is answerable only to the Office of the Presidential Palace, is responsible for compiling, translating and unscrambling SIGINT and ELINT and also for the distribution of the information gathered to the relevant agencies. For example, intelligence about the armed forces of neighbouring countries is sent to the Estikhabarat, while information about civilians suspected of subversion might be sent to the Mukhabarat and/or the Secret Police. Information is channelled to the operations rooms of the various agencies, which in turn pass it on to the relevant department. Al Hadi is an important source of information for Iraq's intelligence apparatus and as a result enjoys considerable status in the intelligence community.

The régime appears happy to leave the distribution of the intelligence gathered to the discretion of the agency's senior personnel, who are obviously trusted. Even though Al Hadi is not represented on the National Security Council, the signs are that Saddam ensures the organisation gets whatever facilities it needs.

Even though the works of Al Hadi has traditionally been shrouded in secrecy, some information has emerged following the August 1996 defection of an officer who worked at the Al Rashedia centre. The organisation has sophisticated computer equipment, some of it apparently acquired via Japan in 1983-84. As a result, Al Hadi has a considerable capacity to intercept and unscramble communications both within and beyond Iraq. Information from the defector indicates that Al Hadi had a particular interest in a number of areas, including communications between the West's Operation 'Provide Comfort', based at USAF Incirlik in Turkey, and Kurdish opposition groups in northern Iraq. There was a particular focus on communications to and from the 'Provide Comfort' Military Co-ordination Centre that used to operate in Zakho, northern Iraq.

The communications of the INC were also closely monitored, and intelligence in this regard was sent to two agencies: the Amn Al-Khass and the Mukhabarat. Intelligence on Kurdish and other opposition activists was compiled with enormous attention to detail, even to the extent of Al Hadi personnel being able to accurately put names on individuals who had identified themselves simply by radio callsigns.

The defector claimed that Al Hadi had recorded all the communications between the

two main Kurdish groups in northern Iraq, the Patriotic Union of Kurdistan (PUK) and the Kurdish Democratic Party (KDP), from 1991. He also stated that, through the station operated by Al Hadi any clandestine radio or transmitter could be pinpointed within 30 seconds of transmissions beginning. Military communications of neighbouring countries also appear to have been monitored with considerable attention. At the Al Rashedia centre, personnel work in three shifts, ensuring round-the-clock cover. The total number of Al Hadi personnel is estimated at about 800.

BRITAIN - NEW CHIEF FOR GCHQ CENTRE - A senior Foreign Office official has been appointed director of the GCHQ secret eavesdropping centre, Britain's biggest intelligence-gathering agency. Kevin Tebbit, aged 51, is at present responsible for defence policy and liaising with intelligence services. He will continue to sit on Whitehall's joint intelligence committee. The previous Director of GCHQ was David Omand, who took office in July 1996. GCHQ which operates from two sites in Cheltenham derives signal intelligence by monitoring a variety of communications and other signals. For this purpose it controls and administers the Composite Signals Organisation (CSO) which operates from a number of locations in the UK and overseas.

► **BRITAIN - GOVERNMENT 'CLAIM' SITES TO CLOSE** - A recent Parliamentary question initiated by ENIGMA produced an interesting written response. On enquiring as to the present functions of Foreign Office radio stations, Gawcott, Creslow and Poundon, they replied that Gawcott had closed and that Creslow & Poundon were both due to close before March 1998. This is most intriguing as the latter two sites have recently been virtually rebuilt, (Creslow in its entirety). Like the HQ site at Hanslope, which has also been entirely rebuilt, these developments represent a new phase in HMG Communications Service. These sites are crucial to MI6 international communications, as well as all British embassy communications. If they are closing then why have hundreds of millions of pounds been spent over the last 5 years on modernising them? Without these facilities the Foreign Office & MI6 simply cannot function. Are they closing shop or are they being economical with the truth? We await March with interest and invite readers to view these sites - Creslow is enormous, Poundon is probably the most secure government installation in Britain, and now one of the most secret. Hanslope encrypts and controls all Lincolnshire Poacher and Cherry Ripe transmissions.

Needless to say the Foreign Office ignored listing the functions of these sites!
(Thanks go to Rob Evans for his efforts).

Acknowledgements for this section: Yorkshire Post Newspaper, Washington Post-(via Chris Smolinski), Intercepts via 'D', J.I.M., IIHSG & AfP & J via Andreas in Germany. Other sources wish to remain anonymous. Thank you.

Please send clippings, news and information of interest to our mailing address.

LOOKING BACK WITH 9'

A STITCH IN TIME - A TALE OF TWO CYPRIOT TAILORS

Early on the morning of 31 August 1971 the Metropolitan Police spotted a Hillman car weaving erratically across Tottenham Court Road in London. They made a routine stop and found that the driver was an official from the Russian Trade Mission in Highgate called Oleg Lyalin, who was also well over the limit! Little did they know that Lyalin was also an MI5 agent who had been passing KGB secrets to Britain since the previous year whilst based in London.

He was arrested after failing to give a breath or blood sample and was kept overnight in a cell before being charged and released on bail the following day. He did not have diplomatic immunity and would have had to leave Britain with his KGB career finished. He therefore had to take the decision to defect and after his court appearance was spirited away by MI5 with his Russian lover to a safe house for debriefing. His defection led to the arrest of some of his agents in the UK, two of whom were controlled by numbers.....

Lyalin was a low ranking officer in the KGB Department V which specialised in sabotage. His function was to organise sabotage in the UK before a Russian attack and this included attacks on V-bomber bases, destroying the Ballistic Missile Early Warning Station (BMEWS) station at Fylingdales in North Yorkshire and flooding the London tube system. To achieve this the Russians needed "sleeper" agents who could be activated in wartime and gather information in peacetime.

Two of these agents in the UK were Cypriot tailors called Kyriacos Costi aged 29 and his brother-in-law Constantinos Martianou aged 26, both of Finsbury Park, North London. Both were arrested on the evening of 9 September 1971 and had been involved with spying for the Russians since the 1960s. Costi had joined Russian intelligence from the Young Communist's League in London, which the Russians asked him to leave to protect his "cover". He recommended his own brother-in-law for recruitment. They were run by several Russian officials based in London following their recruitment which had been made at the Russian stand of the Earls Court exhibition in 1961.

What makes their case interesting to ENIGMA is that they were controlled by numbers and when the Police raided their home at 44 Upper Tollington Park in London, they found a portable SW receiver connected to a tape recorder and some earphones. Beside the radio were blank sheets of paper with 39 groups of 5 digit numbers which formed a code. There were also transmission frequencies and call-signs listed. A few minutes before the raid a government radio operator had monitored a call-sign and message from Moscow and when the tape in Mr Costi's room was played back they found on it the identical callsign and coded message. (The callsign and message were played at their trial).

In Mr Costi's briefcase there were two torch batteries, the tops of which could be

unscrewed. Each battery had a hollowed out cavity containing pieces of paper covered with writing and numbers as well as a small plastic pen. Inside the pen was a rolled up piece of film upon which was recorded a signal plan. There was also a pencil in a cash box which contained a cavity for hiding microfilm and written messages. He had literally been caught with his headphones on and the government revealed that this was only one of numerous coded messages he had received. Costi had received training in Soviet signals, codes and decoding as well as training from Lyalin and his predecessor Vladislav Savin. He was the radio operator, code custodian and ran the communications for the spy pair.

Following their arrests, they both confessed what they had done and they revealed that they had been employed in various capacities. They acted as postmen clearing dead-letter boxes and helped with specific espionage missions as well as acting as talent scouts to find suitable recruits. Missions included discovering the output of a power station at Northfleet, but all Costi did was make a note of the voltage recorded on a pylon. He also had to go to the US base at Brize Norton in Oxfordshire to find out how many aircraft were there but he did not go, much to the annoyance of his bosses! He also went to Fawley to get a size and description of the oil refinery although that information was common knowledge. Whatever benefit the Russians received from the information gathered (which would have been used to aid in sabotage operations), it earned Costi a sentence of six years and his brother-in-law four years.

The radio they used was a manually tuned analogue Vega portable I believe and the broadcasts were in CW. The whole case was both sad and bizarre because they abused the trust of their adopted country and Costi was recruited when he was just 16 years old. No doubt there were many more agents to replace them and the numbers will continue.

■ CALLING ALL READERS IN THE SOUTH EAST OF ENGLAND

"Mike in Kent" & "Rob in Essex" are inviting ENIGMA readers to an evening of 'Numbers' to be held in Purfleet, Essex on WED 11 MARCH 1998. An informal evening to discuss all aspects of the Numbers hobby and a chance to meet other enthusiasts. All are welcome.

The meeting will be held at The Royal Hotel, Purfleet, commencing at 7.30 PM on WED 11th March 1998. If you are interested in attending or would like further information please write to the ENIGMA office or e-mail Mike at <enigma.box@centrenet.co.uk> We would appreciate a contact telephone number (in confidence) just in case of bad weather or other calamity.

Directions - off M25 at J30/31 (first junction north of Dartford Tunnel) take A13 towards London, about 2 miles to Purfleet turn-off at left, and on into Purfleet Village.

■ Message for 'D' Please supply mailing address so we can ask you questions which cannot be included in this newsletter. Do you have remainder of the incomplete list recently received. (Serial nos. would indicate existence of many more entries). Please affix address label securely with tape. Was damaged by P.O., almost lost. Thanks for all info.

THINGS THAT GO BUZZ IN THE NIGHT!

Welcome to another 'Buzz' section. Some signals will only receive a quick mention as we having nothing new to report on them.

(Now S28) See S28 for exclusive news. Page 21

XB-Buzzer 4625 kHz The mystery remains and investigations continue. We have received quite a lot of feedback to our feature that appeared in issue 11. The debate about the "Buzzers" involvement with nuclear matters continues. First, a piece of anonymous information. "Recently I was introduced to a scientist who worked for the European Atomic Energy people and is now with the European Nuclear Inspectorate, monitoring Eastern Europe. He confirmed that the design and condition of most Eastern Nuclear Power Stations together with some of their Research facilities etc, are giving cause for concern and that they are monitored by a variety of means 'including RF links'. The main monitoring point is near Lucerne". He did not know, or would not give, any specific frequencies other than "there's a lot of them". The basis of the monitoring would appear to be "all OK", rather than "we have a problem". All is computer monitored.

The logic behind this is quite sound. With continuous monitoring the state of the system is always known so any change, in signal or loss of, indicates some sort of problem either with equipment or whatever is being monitored. If they relied on the 'we have a problem' type of monitoring they wouldn't know of any equipment failure until it was too late."

We also received an E-Mail from Richard in Paris. He writes "I noted a couple of suggestions that the 'Buzzer' on 4625 kHz is perhaps a link from Chernobyl to the IAEA in Austria. By coincidence, the consultancy company I work for designed and implemented both the UK RIMnet and European equivalent, including monitors in Minsk/Chernobyl etc. I can confirm that although VHF packet radio is used to link to the out-stations, there is no HF link back to IAEA. Actually it is sent by Facsimile directly from the monitoring computer, although it was originally planned to use Telex!"

And what do the International Atomic Energy Agency have to say? David R. Kyd Director, Division of Public Information informs ENIGMA "I refer to your letter of 11 November regarding a general inquiry you are undertaking on the monitoring of radio transmissions. We are not aware of anybody in our Agency or in any other United Nations organisations based at the Vienna International Centre with such a monitoring service. For this reason, we are not in a position to assist you in your inquiry."

We also contacted the ITU in Geneva, who came back with one of their usual ambiguous answers! Failing to comment in response to direct questioning they 'fudged' the issue - "concerning your request, please find attached an extract of the (International Frequency List(IFL) listing all recorded frequency assignments on the frequency 4.625 kHz." This turned out to contain 693 entries(!) none of which look particularly promising. Interestingly, the print only shows 4625.000 so if the signal is off centre it is not going to show, then of course it may not be, as the ITU puts it, 'recorded'. (Can anyone tell me the precise frequency, please). But at least they had the courtesy to reply. This cannot be said for the Moscow - based 'Ministry of

Communications' who have proved to be anything but 'communicative'. Two letters to them about the 4625 signal have failed to produce any response. Vassily in Moscow has also provided us with the address of the rather official - sounding Radio Frequencies State Committee. We will see what they have to say.

With regards to RIMnet (see issue 11), we are hoping to tell you more about it in our next issue, however, Mike in Kent tells me that he had seen an article recently which gave some details of it being linked via the Speaking Clock phone lines in a way similar to the Early Warning "tick, tick", used in the years of the Cold War, and is still operational today. (This is exactly as I predicted - M.G.)

Richard wrote from Hampshire following our comments about the unidentified 'buzz' like noise around the area of 25550 to 27700 kHz. He tell us that he monitors the CB radio frequency and very often hears what he calls "The Sweep": The Buzz-rather like pulses from a nearby radar - is irregular in its rate, doesn't appear at a regular hour, and is not there every day. "I have counted out: (Radar PRF-not regular), local QRM-appears at other CB'ers locations further away and DX propagation - appears when band is dead, or when 'lift' or 'skip' conditions are present. I decided to look closer. By tuning my receiver to a different CB channel it was soon clear that the 'Buzz' was sweeping the band, heard on CH6 and then a few milli-seconds later on CH10. On this occasion it appeared to sweep from 27.5 to 27.8 Mhz. I think it may be space - borne from a satellite. This would explain why it has a similar signal strength at separate locations". Comments welcome.

XC-Crackle This 'unknown' mode is still alive and well on regular 5500/5505 kHz causing interference to Shannon Air Radio on 5505 kHz. Also reported to be using 9145 kHz occasionally.

XM-Backward Music Station Not noted quite so often in recent months. Seems to be hiding in the early hours at around 01.00 and 02.00 using 4740 kHz, also noted in the evenings on 5442 kHz. Another pointless sound?

XW-Workshop It is several years since this was last reported, indeed this is only the third time that is has been heard! The signal sounds like an 'open microphone' at a workshop. Banging, crashing, footsteps, distant voices and ringing telephones can all be heard. The signal was last noted on 1 December 1997 at 19.00 on 4330 kHz. Something of a break-through, for what its worth was noted this time. Strong voices in the Russian language were heard with shouting and feedback from the microphone. What can all this mean? It is also very odd how literally years can pass and then suddenly a signal can return!

XX-The Pip News on this one reaches me from sunny Greece with a letter from our good friend Costas. He writes: "I spent some time listening to The Pip on 5450 and 3757 kHz. The short daylight period during November allows it to reach my location around the clock (almost). It switches from the day frequency (5450) to the night frequency (3757) quite early, at 14.00 and back to 5450 at 05.30. This would indicate a location at a longitude of UTC+3 hours at a high latitude or at UTC+4 hours at a medium/low latitude." Comments welcome.

-The Blank Carrier Life in the pointless zone never was so exciting. We have monitored this signal for several years but never given it a mention. If you tune to 5305 kHz just before the hour (We have noted this signal every hour between 09.00 and 22.00 and guess it is 24 hours per day) you will hear a blank carrier appear on the hour, this sits on the frequency for exactly 20 minutes and then goes off the air. It is not a clean carrier and often has distinctive 'hum' sound on it. Never have we heard it send a single second of information, but it must be important to somebody! The whole tedious process is repeated an hour later.

Please note that 5305 is sometimes occupied by one of those 'white noise' data transmissions which have appeared all over the 3 4 5 & 6 MHz bands in recent years, these 'white noise' wide-band signals have replaced some of the old RATT systems-examples of the UK transmission style (possibly from the Royal Navy stations at Inskip near Blackpool or at Crimond, NE Scotland) can often be found on 5237 kHz or if you want to compare it with the Russian version try 6832 kHz for an example.

Just staying on known modes for a moment we often receive letters about the NATO Link-11 system, another of those annoying wide signals. For those not familiar, it is the one which goes 'dinkdinkdinkdinkDINKDINKdinkdink' - sounds like 'ping-pong' balls. These are again heard on the lower bands. Although there's been a lot of speculation as to exactly what data is being sent it is reported to be an encrypted link sending real time 'pictures' of all radar contacts in a given area. For those of a technical nature it is reported to be a US Military/NATO multi tone DPSK system using 16 tones (1 doppler,14data,1sync). The data tones are 4-PSK modulated and spaced at 110Hz, while the sync tone is 2-PSK modulated. Identified rates are 1364 bits/sec and 2250 bit/sec (although Kligenfuss lists a 2400 baud rate). We have received letters about it although it is not really in ENIGMA's area. Some popular frequencies used are 2836 3870 5726 6918 8030 9282 kHz to name just a few.

XF - FADERS

No news is good news goes the saying...in this case no news is simply that! Despite our banging on about these for several years (see last issue) nothing new to tell you. Must try harder! NOTE - the entry in "Conet Project's" CD decribed as being a fader is not - it is another recording of Backward Music station.

XMEW - THE 'MEW'

Noticed for many years yet until now never mentioned in this newsletter; it is the sort of thing one tends to ignore. The Mew as its name suggests is a plaintive, endless mewing sound which frequents the high 8 or lower 9 MHz band and caused by a slowly swept carrier. Four transmissions always operate in 2 parallel pairs, the transmissions in each pair always being precisely 110 kHz apart. Signals are generally weak in the UK but audible 24 hours daily. Careful tuning and a sensitive receiver are necessary. (BFO needs to be switched on). All transmissions occur between 8.8 & 9.41 MHz. frequencies change regularly without warning and ~~often~~ end in either 3 or 7 kHz e.g. 8873//8983 - 9203//9313 or 8857//8967 -9297//9407 etc. Pairs are not related to one another but are always separated by more than 110 kHz. Any ideas? (So far only M.G. has reported this, and confirmation would be very welcome!)

THE CONET PROJECT - E.N.I.G.M.A. REVIEW

The Conet Project, brainchild of Akin Fernandez of the recording company Irdial Discs (London), has at last come to fruition. It represents an audio archive of nearly all the numbers stations recorded by unofficial monitors since the early 1970s. It consists of a four CD set of off-air recordings (with a fifth promised for "late 1997"), and as such is unique. It comes complete with a booklet which includes Akin's excellently written introduction to the subject.

As the world's first attempt at documenting Numbers Stations in this way, we at ENIGMA, hail this as an achievement. Regrettably, however, we also have many reservations about the way these recordings have been made and catalogued. There are a considerable number of errors - some of them quite significant. In a short review like this, we cannot provide a full list of these, but will give some examples later.

Our major criticism is that what has been termed the ENIGMA Format List in the accompanying booklet, was not intended to be a format list alone, but was the actual index of recordings. Although most of the recordings on the list were from ENIGMA sound archives, many had been sent to either Irdial Discs or ENIGMA by monitors in various countries. Some of the rarer, now extinct, stations were recorded by Christian Spremburg, a blind listener in Germany, to whom ENIGMA is very grateful. Although not acknowledged in the booklet, he provided recordings of G8A,G8B,G20,G21,G22,V18,V19 and E21(unaccountably not included). He also identified the music played by G10 and S26, and provided good quality recordings of this music although not off-air. None of these tracks were included on the CDs, nor was V19's introductory music. Why? I (M.G.) provided S10's 'Piano Piece' interval signature. Presumably this was excluded because it was not off-air, but was my own rendition of this music taken from memory - but at least someone may have been able to identify it.

These were some of the omissions. Errors are more important. The Faders, which we have long tried to describe and create interest in, were not included on the discs. The entry listed as 'Faders' in the disc index turned out to be a second 'Backward Music station'. Instead of describing S19 as Czech Man Control it is listed as 'Pozor' - quite illogically. There are many more errors of this nature.

The whole idea of our (renamed) "ENIGMA Format List" was to provide a wide representative sample of all stations reported/recorded by that date. All Conet Project's own recordings were sent to us for editing. Entries were painstakingly arranged by ENIGMA in Reference Number order. Additionally, they were also painstakingly transcribed digit by digit - everything transcribed on that list, was actually on the tapes sent to Irdial Discs, yet many of the entries were not used, and none of this is apparent from reading

through the summarised entries in the disc index - not the work of ENIGMA. The ENIGMA list took many, many hours to compile and edit onto tape, but its purpose now has far less relevance, as it bears little relation to the final product, i.e. the discs.

The Morse stations have been tagged on at the end of Disc 4 and only include M1, M2 & M3. We can only hope that the fifth disc will include the rest. Morse station recordings are very helpful for identification as they enable such factors as tone quality, rhythm, keying characteristics etc. to be compared - things which cannot be easily described in words. They may not have the glamour of voice stations but they represent the vast bulk of numbers activity, and should be treated accordingly. Unaccountably, the single letter transmissions included on the ENIGMA list and tapes, have been omitted entirely from the "Format List". (Incidentally, on the very first track of disc 1 the morse heard in the background is the rare 'X' single letter transmission rumoured to have come from Czechoslovakia, yet it is ignored in the disc notes).

There is also a lot of time-consuming duplication on the discs - valuable space which could have been put to better use. ENIGMA had hoped that the Conet Project would have become the definitive sound archive for Numbers Stations. Unfortunately, it cannot be relied upon for accuracy, until the errors are corrected. At present, it can only be seen as an interesting sound archive - where much of the accompanying information is best not taken as definitive.

WHO'S WHO AT ENIGMA

Various subscribers have asked, from time to time, about just who is responsible for what at ENIGMA. The fact that there are three Mikes has caused much confusion, and the recent article by Duncan Campbell in the Guardian newspaper has only added to it.

So, to keep the intelligence agencies happy, we thought it was time to clarify things. (We needn't remind those of you with 'professional vested interests' that the sensitive disclosures which follow may, of course, be Dis...orm..ion).

There are only two of us at ENIGMA HQ: Chris Midgley & Mike Gauffman. Chris was the founder of this growing international counter-intelligence network (!), so he is ultimately responsible over matters of copyright of numbers stations and official secrets disclosures. Needless to say, he is not writing this! Chris deals with most of the mail replies and subscriptions. He also helps compile the Newsletter, is largely responsible for Voice News and writes various articles. Around the time of ENIGMA's 3rd Newsletter Mike G. appeared on the scene, a shadowy character who had been monitoring numbers stations since the mid-60s. He edits the Newsletter, writes features, and has a particular interest in Morse stations and historical aspects. He occasionally

communicates with subscribers, and may or may not know more about the Tyrolean Music Station than he lets on.

Another Mike, Mike Chace, who was based in Bath, 200 miles from HQ handled E-mail and also wrote articles. Since his emigration to USA, his role has now largely been taken over by Mike in Sussex. Mike sifts through the ever-increasing Internet coverage of Numbers stations, 90% of which is of low grade and of no interest to us. He also replies to E-mail queries on behalf of ENIGMA. It was this Mike who was interviewed for the Guardian. ENIGMA HQ had been wary about this proposed article as it had been intended to be light-hearted, and we feared that we'd have little editorial influence on it. In the light of previous media experience we were not prepared to take part in this. As it happened, however, the article turned out to be well-balanced with few errors.

We cannot finish without mentioning Guy from Hampshire whose monumental monitoring activities provide us with much-needed, up-to-date weekly logs. He also does other valuable work for ENIGMA.

Without all our subscribers we wouldn't exist, and we are always grateful for your comments, ideas and contributions.

Radio Station REM 4

We have referred to the above station in the past, and although not strictly ENIGMA material, it is still intriguing that so few people seem to be aware of its existence. Using two or three parallel frequencies REM 4 broadcasts four times daily at approx 0435, 1035(1025?), 1635 & 2235 on 4745, 5715, 6700, 7450, 11275, 13360kHz. Transmissions are in reduced carrier AM, and are preceded by a harsh tone which may appear an hour or more before the broadcast. It is impossible not to notice this tone, yet as far as we know, English language radio hobbyist magazines have never even mentioned the station.

When the tone eventually ceases the broadcast abruptly begins, sometimes but not always announcing itself with the words "Govorit Radiostantsia REM Chetirye". Delivery is informal and sometimes quite unprofessional, and made by various male and female announcers. I have a recording of a group of young women announcers trying to read out data, and every so often bursting into fits of giggles! Broadcasts vary from a few minutes to 20min or so, ending as abruptly as they begin, with up to half an hour of tone again. Often there are long pauses within the delivery, and the sound of switches being clicked, footsteps, and various sundry background sounds.

So what exactly is REM 4 up to? According to an article in the "Moscovski Informatsioni DX Bulletin" No 53, Dec 96, its purpose is to inform the world of disturbances in the Earth's magnetic field! Ionospheric summaries are sent in code, predicting events over the following 5 day period. The words "MAGKHA PROGNOZ" are followed by 5fig groups. Part of the messsge involve a 5 point code: 0=very calm, 1=calm, 2=unstable, 3=weak disturbance, 4=moderate disturbance, 5=strong disturbance. These are related to Ar intervals and Bolfom numbers - of which more in a future issue. With my very basic Russian and the help of a technical dictionary I have translated the article, and end up by wondering why such a station is needed. Who listens to it? Who runs it? When did it begin? What about those 'chatty' broadcasts where numbers rarely crop up?

E5-THE LIFE AND TIMES OF CYNTHIA - PART TWO

Written by P.S. in Saffron Walden with additional material from ENIGMA.

■ **DIGITAL TRANSMISSIONS:** Voices are not the only sounds emitted by Cynthia's transmitters, A number of monitors have noted the presence of data signals close to, or borne on the same carrier as that transmitted by the Counting Stations. The two data signals heard thus far are as follows:

- a) 2400 bps PSK (Phase Shift Keyed) System
- b) 109.8 bd synchronous FSK System

Neither of these systems can be decoded with even high-grade amateur telegraphy analysis equipment.

In general, the signals can be heard as follows. The Counting Station appears on frequency (often up to an hour before the voice transmission time) and sends carrier plus the usual noise associated with the station when idle. At about 20 or 40 minutes before the voice transmission, the noise will stop to be replaced by the fast PSK signal, which has a very harsh, wideband, rushing "white noise" sound. The PSK signal is only present for a few minutes and is offset from the Counting Station's carrier by about 2kHz.

About five minutes before voice transmission time, the PSK signal stops, to be replaced by a plain carrier. The voice transmission then follows. Often, at the conclusion of the voice transmission, the 109.8bd FSK signal will appear, again only on-air for a few minutes.

What can we infer from this behaviour? Almost certainly, the Counting Stations transmit messages (perhaps even the same message) to different grades of users. Those with the highest security risk resorting to pen and paper using the voice transmissions, the middle grade users have the decoder for the 109.8bd signal and the lowest grade using the PSK signal - such as embassies who need to monitor messages to certain agents.

■ **JAMMING:** If there are those amongst us who like to take an interest in Cynthia's activities, then there have been times when others have put a lot of effort into trying to prevent her from being heard at all, by which I mean the situation which existed a few years ago when many of the transmissions were subjected to very effective jamming. This was a regular occurrence when I first became an enthusiast during the early nineties. It took the form of a carrier which was swept slightly either side of the channel which produced a characteristic kind of interference which usually made copy pretty well impossible - something similar can still be heard on some of the "Lincolnshire Poacher" (E3) transmissions. Sometimes those controlling the jammers would allow the ten-minute "call-up" to progress and then switch the jammers on just before the 5 figures were due to start. Often during a long transmission, it was quite common to hear the jammers go off after around 25 minutes or so and then come back on again, no doubt the operators having taken time out to listen to see if Cynthia was still there and on finding that she was, turning the jammer back on again.

The jammers never quite got the hang of call-up '383'. This was a most peculiar call which had the standard 10 minute preamble, but as the last tone sounded, abruptly went off air and never sent any messages. Jamming would commence during the call-up and continue until the Cynthia was checked and found to be absent. The (E14) 4 figure 'control' messages also attracted the attention of the jammers who did seem to realise that these particular transmissions were indeed only 10 minutes in length.

The occasions on which jamming was observed gradually became less frequent and had ceased entirely by the middle of 1994. However, after having been absent for some time the jammers returned briefly during the late summer of 1996. On Saturday 3rd August at 20.00 UTC, on 7746//9160 kHz a jammer came on just after the ten minute warm-up had finished, and again on Monday 5th August at 20.00 on the same frequencies. This 20.00 Saturday and Monday slot was subjected to the jammers a couple more times during August 1996 since when, happily nothing further has been heard of them. As far as I am aware, no other Cynthia transmissions were given the jammer treatment at that time. Who was spending so much time and transmitter power in operating the jammers ? It must be a country at odds with the foreign policy aims of the USA; with the demise of the Soviet Union, that leaves a small number of Middle Eastern countries, and in particular Iraq. Perhaps Sadam Hussein's merry men had a sneaking suspicion that the messages were directed at CIA agents operating inside Iraq and decided to try and block the route by which they received their instructions.

■ **MISTAKES:** Cynthia is noted for her reliability; mistakes and failures during a transmission are few and far between, but they do rarely occur. When something goes wrong with the audio content-with the transmitter still putting out RF - the voice is replaced by an audio pulsed tone to give a "rapid-dash" effect at the rate of about three per second; this remains on until the voice returns, the problem no doubt having been fixed. Such an occurrence was noted on Saturday 22nd June 1996 at 20.00 UTC on 7746//9160 kHz; the transmission failed during the ten minute call-up while Cynthia was calling "514" with about a minute to go before the 5 figures were due. The tones came on and remained on for about three minutes, the voice returning at 20.12 with "count 212" and the transmission proceeding as normal. On Saturday 9th November, a transmission at 16.00 UTC on 10529 kHz went off at 16.04; again tones came on with the voice returning at 16.06. Here the procedure used was "Go back to the beginning and start again" because the call-up continued until 16.16 UTC. Strangest of all was the transmission observed on Wednesday 24th April 1996 at 13.03 UTC on 8116 kHz where there was a Cynthia transmission already into her 5 figures - when she would be expected to be still in the call-up until 13.10. The "repeat" followed by "count 196" came at 13.05 UTC, with "end" at 13.23 which means that if the transmissions followed the usual format it must have started at about 12.47. This timing has only been noted very occasionally.

■ **TEST TRANSMISSIONS:** On rare occasions transmitter tests have been noted on up to 13 frequencies in parallel, these consist of a test tone sent for several

hours on a wide spread of Cynthia frequencies. The purpose of these tests is unknown but certainly gives an indication of the resources available.

■ **SCHEDULES:** As mentioned earlier, Cynthia works to a definite schedule, that is to say she turns up at the same time on the same day of the week on the same frequency. These schedules change from time to time. Some of them - such as the Sunday 16.00 UTC on 9070 kHz have been around for years while others will only exist for a few weeks. One of the shortest observed schedules was on Saturdays and Sundays at 09.00 UTC - which is a somewhat unusual time of day for Cynthia to put in an appearance- in the summer of 1996 on 9070//6790 kHz. This was first noted on Saturday 20th July and last heard on Sunday 18th August, so lasted a month. In May 1995 it was noticed that there was a 5 figure transmission at the same time of day on every day of the week, at 19.00 UTC on 5153 kHz; this is the only time a Cynthia 5 figure has been observed turning up at the same time and the same place every day. This daily airing took place all through the summer of 1995 until the end of August. Other patterns have included transmissions which are heard to repeat on the same day and on the same frequencies one hour after the first airing.

■ **MESSAGE LENGTH:** The length of a message i.e. the number of 5f groups - can vary from a figure in the low 40's to 215 which is the maximum number, although this was not always the case; until the end of 1994 the maximum length of a message was 225 groups. Any Cynthia transmission which takes place around the middle of the day, UK time, i.e 11.00 12.00 or 13.00 UTC, always has a "count" of 215. Why this should be so can only be guessed at but perhaps certain 'opaque' fillers are used to take the messages up to 215, or perhaps the messages are for training and practice purposes only rather than serious communications for agents in the field.

■ **SUMMARY:** So what is Cynthia getting up to at the present time? Well, she still turns up on every day of the week. Activity remains close to an all time high; (upto 50 transmissions noted in one week) Saturday is probably the best day on which to find her, signal strengths are in general weaker than those of five or six years ago - at least they are for the U.K. listener. Reception of several of the transmissions is made difficult by strong utility stations close to the operating frequency, but matters can often be resolved by switching the receiver to CW and tuning for zero beat with the carrier and switch to a narrower IF selectivity. The persistent use of 5850 kHz is strange; it is inside the 49 Metre BC band with consequent QRM from broadcasters. An American religious station gave up trying to compete on this frequency and moved elsewhere; recently Swiss Radio International and radio Sofia, Bulgaria have taken up residence on 5850 kHz. On the plus side at least the jammers have not payed a visit for a while. There has not been the general shift to USB as I thought there might be; the majority of E5s are still in lop-sided A.M. That's about it; I suppose Cynthia's distinctive voice must have begun with a real live American lady speaking the numbers to be stored in the memory of a computer for the purpose of message synthesis; I sometimes wonder who she is and if she is aware how often she is listened to by some of us number stations enthusiasts ! She is the other Voice of America.

LOOKING BACK with 'D'

Radio in the Gehlen Organisation

German Intelligence after the war started under US control using ex-Nazi Intelligence Officers at Oberursel near Frankfurt in a US Army camp. Early spy transmissions were made from there in 1946 to German intelligence people such as "Werewolf" units left in the USSR & Eastern Europe. It was depressing and resembled a POW Camp so the decision was taken to move it to Pullach in Bavaria. Many agents already had their homes and families in Southern Germany and Oberursel was insecure as well as overcrowded. Pullach offered space and greater privacy so was considered ideal for Bureau Gehlen, and later the BND's purposes.

The "Org" moved to Pullach in 1947 into an estate which had previously housed Hess's staff, Dachau workers, plus Bormann's staff later on. The US spent \$3 million to convert Pullach with a modern communications centre and refurbished accommodation plus large underground bunkers 3 floors deep.

It was under cover as the "South German Industries Utilization Company", and over 10 years \$200 million was provided by the US. Numerous offices were established all over Germany under commercial cover and were usually known by 4 digit number codes. A counter-intelligence office was established in Munich-Straubing and the "The Org" as it was known to insiders grew steadily using commercial firms as cover to smuggle transmitters to agents in the East. These agents were known as "V-men" (Vertrauens Mann) or "trusted men" who were mainly German ex-POW's from the USSR or from the German SD & SS Army or Eastern Bloc refugees.

Over 60 schools were established for agents but the agent handlers never became over-familiar with agents. Much trouble was taken to protect agents using an ABC code in CW. This involved warning signals being sent and repeated with the agent's code number eg. 364A would tell him there was danger and to go into hiding. 364B meant radio silence and to go into hiding before preparing to leave. 364C meant contact the Head "V-Mann" via courier or dead-drop.

The system of taking agents off air temporarily saved many lives such as Heinz Fink who operated a radio in Potsdam for 10 years before being killed in 1962. He was placed on a sleeper roster for months as was Franz Pankraz who worked at the Soviet radio station at Koepenick for 15 years. Much infiltration of radio operators was carried out in the early years as prior to 1948 movement over the inner German border was easy and they survived in pace for many years. One was Leopold Muller who survived at the telecommunication centre at Rostock as an engineer responsible for transmitters at Wittenberg, Schwerin and Ludwigslust. He provided details of DDR radio nets with other WTO countries. His one-time-pads had 6 columns of 5 digit groups and were 1 inch by 2 inches. It was too difficult to see on a photograph how many groups were in each column.

Radio was the mainstay of the Org after 1956 when East/West travel was restricted and in 1961 when the Berlin wall was erected. Radio Free Europe and other "private" stations in Germany were widely and successfully used for sending coded and musical signals to agents. Gehlen had a powerful transmitter near Pullach and another at

Stocking near Munich. A third was operated by the Frankfurt/Cologne regional branch of the Org. It was common for Soviet and DDR interceptors to RDF the transmitter then Pullach would order radio silence. This worked both ways as the US CIC and the Org used electronics supplied by the FCC to catch Eastern agents.

1952-3 saw the Berlin uprising and radio rather than couriers was used for communications. It was necessary to train a large number of radio operators using small transmitters with low output power. These modern sets supplied by the US were easy to conceal and smuggle across borders. Some people were brought to West Berlin for training in the use of the radios and numerous operators were sent into the East. Gehlen had a transmitter in West Berlin and in Munich; an emergency receiver was tuned to prearranged wavelengths and hidden amongst the aerials at Radio Free Europe. Another receiver was installed at Pullach to receive the flow of signals from East Berlin.

The DDR Ministry of State Security thought in 1952 that there was one W/T operator for eleven or more West German agents. By 1953 they believed that the ratio was 1:7. The following estimate was produced by DDR security in 1963 for radio operators sponsored by Gehlen and working in the East, along with their estimated locations:

LOCATION	1953-55	1956-63
East Berlin	17	40
Chemnitz	17	20
Leipzig	32	18

It was not felt to be a good idea to burden agents with both a transmitter and collection duties. They would collect information then place it in a dead letter box before a courier would take it to the radio operator. Very able operators were recruited by "Hochberg" and "Paulberg" usually from amongst the ranks of ex-SS and German Army operators. One was Joachim Koch who had sent trial signals and received "blind" broadcasts from Stocking. He had a 12 Watt transmitter which was tuned to the Frankfurt and Stocking receiver stations. The signals were never above 16MHz and the emphasis was on strong signals over a long distance. He had three transmitters and disguised his aerial as a washing line, and mainly concentrated on airfields and troop movements, until his detection and execution. The largest network was called "North-East" and was still intact in 1971 providing information on railways, bridges and airfields. One agent made 68 crossings of the East/West German border. Later, transmitters were stored in thermos flasks which were provided by the US.

Numerous posts were established by "Paulberg" all over the DDR and a 1956 DDR Security map showed 47 places where Gehlen radio posts were operating and many more were set up after this. The US began supplying burst transmitters with a maximum transmission time of 45 seconds and a rate of 5,400 signs per minute by electronic compression. These needed simple instructions over 1-2 days, whereas manual CW operators needed 8 weeks and usually only managed 80 signs per minute

The BND later spent 500,000 DM to replace the radio equipment of the V-men. Many sets were devised with remote control so operators could make a quick escape if necessary. Similar operations were mounted on a limited scale against the USSR and other communist countries but such deep infiltration operations were rare.

Many agents were equipped with MW receivers which had a conversion device to turn it into a HF transmitter broadcasting on 3-5 MHz. Not much power was needed because the signal only had to cross the Inner German border. For operations in Armenia and Georgia a relay station was set up in Tehran and another in Stockholm for operations in the Baltic states during the 1950's.

Gehlen was almost dismissed when French Security discovered that he had been spying on the UK and France and his agents had collected information on Holy Loch, Thor sites and the Ballistic Missile Early Warning Station at Fylingdales, Yorkshire, England.

A recent book published in Germany "Top-Spione" by Guido Knopp provides some excellent background information and direct references to the BND's number station activities. The book covers six biographies but perhaps most interesting to numbers monitors is the case of Werner Stiller. Stiller contacted the BND via a relative of his West German girlfriend. He was later to receive a letter, information about radio frequencies code charts and 10 SAE's with pre-written letters to addresses in the FRG - and some invisible ink of course ! The one thing that was missing was a shortwave receiver that could be tuned to 3.7...4.0 MHz, "in that range the BND broadcast his messages". So his girlfriend went through to East Berlin and managed to obtain a "Telefunken International 101". The BND broadcast daily under the headers 688 and 226. To ensure that the messages were received they were broadcast at different (fixed) time slots. The broadcasts started with the Wessel-anthem, the interval signal of the BND, so named after Gerhard Wessel, the president of the BND at that time. A female voice spoke: "Es liegen Mitteilungen vor für..."the group count was given. Receiving and decoding the messages was the task of Stiller's girlfriend Helga Michnowski. Therefore she always had to carry the radio with her. She later said that it would have been better if she could have used a headphone, but the GDR-headphone-plug did not fit into the West German radio. It was difficult to understand the broadcasts, sometimes she had to listen more than once, because the signal strength varied and also due to interference. The broadcasts were in 5F-groups and if you missed one it was pointless to continue listening. For every group there was a group on the one-time-pad, which had to be subtracted from the one on the radio. Once they had the correct numbers these had to be used with a code-chart to read the actual message. The reception and decoding of a message could take 4-5 hours. The messages mainly comprised of questions about the identity, the importance and the knowledge of their new, unknown contacts.

The information concerning Stiller and his girlfriend provides an unusual insight into the workings of the BND and although it refers to a period in the mid-1970's it would suggest that these messages were sent by DFD21/DFC37 stations. Stiller also mentions how messages were sent back to his masters in the FRG. Stiller used the "Interzonenzüge", trains from West Berlin to the FRG (with stops in the GDR). They would board the train, hide material in the toilet compartment and leave the train. When the train was in the FRG the BND-personel would collect the information. That's what you could call a mobile dead letter box ! 'D' & Andreas.